

UNIV. OF
TORONTO
LIBRARY

Med
A

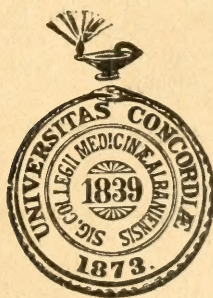
ALBANY
MEDICAL ANNALS

Journal of the Alumni Association of the
Albany Medical College

EDITED BY J. MONTGOMERY MOSHER, M. D.

VOLUME XLI

Ἀσφαλὲς καὶ ἔμπεδον ἔστω τὸ σὸν ἔδος. Ἐκ σκότου μὲν ἔλαβε
φάος, ἐκ δὲ πάθους ἀναψυχὴν



400396
19.2.42

ALBANY
THE BRANDOW PRINTING COMPANY
1920

CONTRIBUTORS

TO

ALBANY MEDICAL ANNALS, VOLUME XLI

- | | |
|--|--|
| <p>George E. Beilby, M. D., Albany, N. Y.</p> <p>John M. Berry, M. D., Albany, N. Y.</p> <p>Herman M. Biggs, M. D., New York City.</p> <p>Harry W. Carey, M. D., Troy, N. Y.</p> <p>Joseph E. Clark, M. D., Albany, N. Y.</p> <p>Charles M. Culver, M. D., Albany, N. Y.</p> <p>Harvey Cushing, M. D., Boston, Mass.</p> <p>Luther Emerick, M. D., Saugerties, N. Y.</p> <p>Ellen Finley, Albany, N. Y.</p> <p>Florence R. Freeman, Albany, N. Y.</p> <p>Nelson K. Fromm, A. B., M. D., Albany, N. Y.</p> <p>William F. Fullgraff, Albany, N. Y.</p> <p>Herman C. Gordinier, A. M., M. D., Troy, N. Y.</p> <p>L. Whittington Gorham, M. D., Albany, N. Y.</p> <p>Grace S. Harper, Albany, N. Y.</p> <p>Percival C. Harrig, M. D., Albany, N. Y.</p> <p>Clinton B. Hawn, M. D., Albany, N. Y.</p> <p>W. P. Howard, M. D., Albany, N. Y.</p> <p>William A. Howe, M. D., Albany, N. Y.</p> <p>Sally Johnson, Albany, N. Y.</p> <p>Arthur Knudson, Ph. D., Albany, N. Y.</p> <p>Joseph S. Lawrence, M. D., Albany, N. Y.</p> | <p>Frederick W. McSorley, M. D., Albany, N. Y.</p> <p>Douglas C. Moriarta, Ph. G., M. D., F. A. C. S., Saratoga Springs, N. Y.</p> <p>Robert T. Morris, M. D., New York City.</p> <p>W. H. Morse, M. D., Hartford, Conn.</p> <p>J. Montgomery Mosher, M. D., Albany, N. Y.</p> <p>Florence R. Noll, Albany, N. Y.</p> <p>Thomas Ordway, M. D., Albany, N. Y.</p> <p>Robert C. Paterson, M. D., Saranac Lake, N. Y.</p> <p>Frances K. Ray, Albany, N. Y.</p> <p>Thomas W. Salmon, M. D., New York City.</p> <p>Arthur Sautter, M. D., Albany, N. Y.</p> <p>John R. Shannon, M. D., New York City.</p> <p>E. MacD. Stanton, M. D., F. A. C. S., Schenectady, N. Y.</p> <p>Arthur H. Stein, M. D., Albany, N. Y.</p> <p>Jean Tait, A. B., Albany, N. Y.</p> <p>Frank Van Der Bogert, M. D., Schenectady, N. Y.</p> <p>James N. Vander Veer, M. D., Albany, N. Y.</p> <p>Henry Viets, M. D., Boston, Mass.</p> <p>C. W. Woodall, M. D., Schenectady, N. Y.</p> |
|--|--|

ALBANY MEDICAL ANNALS

Original Communication

METABOLISM IN LEUKEMIA AND CANCER DURING RADIUM TREATMENT.

*Read at the meeting of the American Association for Clinical
Investigation, June, 1919.*

By THOMAS ORDWAY, M. D., JEAN TAIT, A. B., AND
ARTHUR KNUDSON, PH. D.

*(From the Departments of Medicine and Biological Chemistry, Albany Medical College and
Albany Hospital)*

INTRODUCTION

Shortly after the inception of the study of the therapeutic effects of radium at the Huntington Hospital of the Cancer Commission of Harvard University, in the fall of 1913, one of us became interested in the "constitutional reactions" which in certain instances followed the application of radium. These "reactions" were particularly marked in cases of cancer with suppuration such as carcinoma of the cervix and in cases of leukemia which had undergone prolonged radiation.

Levin has also noted that in certain instances, treatment of leukemia by x-ray and radium may at the beginning cause headache, nausea, vomiting, diarrhoea, and rise in temperature.¹

These constitutional symptoms have also been described as occurring in normal individuals subjected, during their routine work, to the radiations of radium.^{2 3}

These general symptoms consisted of nausea, more rarely vomiting, malaise, weakness, even prostration, headache, undue fatigue, unusual need of sleep, increased excitability, fretfulness, irritability, disorders of menstruation, and attacks of dizziness.

Such symptoms are, however, common in many people at times and as they cannot be accurately and objectively recorded there is doubt if they can be proved in the majority of cases to be definitely due to exposure to radium. Such symptoms may be due to close confinement, tiring routine, lack of outdoor exercise, and other causes. General symptoms undoubtedly do occur as the result of radiation from radium and they are analagous, indeed appear identical, to those produced by massive doses of Roentgen rays. For detailed literature, discussion and interpretation of this "intoxication" reference should be made to the recent excellent and suggestive paper of Hall and Whipple.⁴

Considering that toxic products from tissue autolysis might be responsible for the general symptoms following radiation by radium and that such disturbed metabolism might be indicated by changes in the urine and blood a preliminary study was made in 1913 and 1914, in association with Hammett and Harris of the Harvard Medical School, in cases of leukemia treated by surface applications of radium, for in such cases the remarkable phenomenon of the complete disappearance of the enormously enlarged leukemic spleen by autolysis should be manifested by changes in the metabolism. At this time a marked increase in the products of nitrogenous metabolism was found in the urine.⁵

In 1915 a similar, but more detailed study of another case of advanced myelogenous leukemia was reported by Ordway⁶ and Knudson.⁷ Not only was the amount of total nitrogen, urea and ammonia found to be markedly increased immediately after the action of radium, as in the preliminary work above referred to, but the phosphates increased as high as 400 per cent over the examination at the beginning of treatment.

In the present paper this latter case will be briefly reviewed and an additional case of myelogenous leukemia and two cases of malignant disease (sarcoma of the thoracic wall and clavicle with extension to deep tissues of the neck and a case of post operative recurrent carcinoma of the breast), have been studied by similar methods.

METHODS

A record of all food taken was kept and found to vary within narrow limits. The diet was practically purin free before, during and following the series of treatments. It consisted chiefly

of bread, cereal, potatoes, milk, butter, eggs, fruit, and occasionally, beef, chicken and a few vegetables.

The urine was collected for 24-hour periods in thymolized bottles and brought to the laboratory for analysis immediately after the 24-hour period was up. Total nitrogen was estimated by the modified Kjeldahl method, urea by the urease method, ammonia by Folin's method, uric acid by Benedict's modification of Folin's colorimetric method, creatinin by Folin's method, phosphoric acid by titration with uranium acetate, and the acidity by Folin's method. The urine was at all times during the treatment free from albumen and sugar. In certain instances it was unfortunate that observations could not have been carried out for a longer period before radiation but it is obvious that the changes in metabolism are found almost immediately after radiation, in leukemia even before the white blood count is affected.

For details regarding the method of radium application the reader is referred to previous articles by Ordway.⁵

CASE I. Woman, 30 years old, married. Entered Albany Hospital October 25, 1915. Patient had been suffering from myelogenous leukemia for seven months. There had been increasing weakness, emaciation, very marked abdominal enlargement due to the enormously enlarged spleen. The white count just before beginning radium treatment was 495,000. The treatment consisted in three series of radium applications.

For detailed history and physical examination and discussion see article by Ordway⁵ previously referred to.

We are indebted to the courtesy and cooperation of the Memorial Hospital, New York City, for the radium emanation used in treatment.

Series 1. November 6, 1915, 6 p. m., 49.5 mc. of radium emanation in a silver applicator 2 x 2 cm. was applied to the abdomen. Small square areas were marked off over the greatly enlarged spleen and numbered consecutively 1 to 22. The applicator was applied to area No. 1 for four hours and successively to the consecutive areas for a similar time. The filtration used was 1 mm. of silver, 1 mm. of lead, 20 sheets of ordinary filter paper, 10 layers of gauze. When 22 squares had been covered in the manner above described the strength of the radium was approximately 25 mc.

Series 2. December 18, 1915, 60 mc. of radium emanation were applied to the surface over the area of enlarged spleen using the same technique except that 3 mm. of lead were used for filtration and the radium was left for 6 hours on each of the 18 squares marked over the area of splenic enlargement.

Series 3. January 27, 1916. Applications were started at 7 p. m. The

applicator contained 61 mc. of radium emanation at 12:15 p. m. on the same date. The radium was applied to each of 15 squares for 6 hours. Three mm. of lead were used for filtration. The gauze and paper were the same as in Series I.

Immediately following the third series the white blood count was reduced to 28,000.

Chemical examination of the blood obtained on November 5, 1915, the day before radium treatment, showed 3.78 mgm. of uric acid per 100 cc. Similar examination of blood obtained November 27, 1915, three weeks after treatment by radium had been commenced, showed 2.48 mgm. per 100 cc. The third examination, obtained March 3, 1916, about five weeks after radium treatment was concluded, showed 3.5 mgm. per 100 cc. These three examinations at relatively long intervals reveal little change in the uric acid in the blood. Daily examinations during radiation might have given different results.

The urine analyses are recorded in the table and chart (Figs. 1 and 2). On observing the table and chart it is seen that after the first series of radium treatment the total nitrogen, urea nitrogen, and ammonia nitrogen began to increase immediately; at the end of seven days the excretion reached a maximum and was more than double. After the seventh day there was a slight decrease and then remained more or less constant. The uric acid output showed a slight increase for the first seven days and then remained about the same. The elimination of total phosphates showed a most remarkable result. Phosphates increased immediately; after the seventh day of treatment there was a gradual fall toward the next series of radium treatment. The fall did not reach normal but remained about twice normal. After the second series of radium treatment the total nitrogen, urea nitrogen, ammonia nitrogen and uric acid showed a similar increase in excretion for six or seven days. Phosphate excretion was likewise increased. After the third series of radium treatments the increased excretion of the various substances above mentioned was similar. It is interesting to note that after all three series of radium treatments the increase in excretion continued for about six or seven days after the beginning of treatment and then dropped. The phosphate elimination showed the greatest increase.

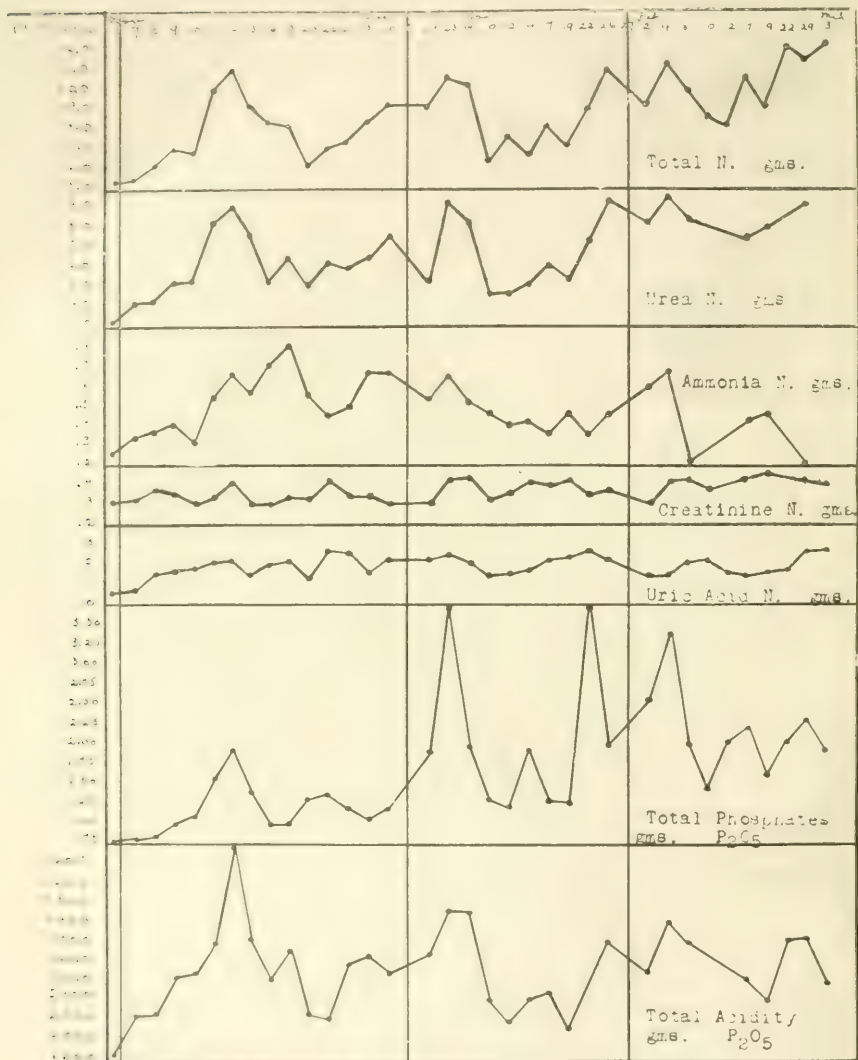
CASE II. Man, physician, 41 years old, married. Entered the Albany Hospital, service of Dr. Ordway, July 7, 1917. Hospital No. 60552. Patient complained of weakness and feeling of fullness in the abdomen... In 1914

FIG. 1. Case I—Myelogenous Leukemia. Table of analyses of urine during radium treatment.

Date	Volume	Specific Gravity	Total Solids	Albumin	Urea Nitrogen	Urea Nitrogen	Urea Nitrogen	Total Urea Nitrogen	Total Solids
	cc		gms	gms	gms	gms	gms	gms	gms
Nov 6	810	1.017	5.40	3.40	0.245	0.333	0.078	174	0.210
7	810	1.017	5.40	3.40	0.317	0.336	0.095	251	0.205
8	810	1.017	5.280	3.30	0.370	0.385	0.167	256	0.200
9	1030	1.010	7.00	5.10	0.405	0.312	0.389	337	1.100
10	1023	1.010	6.40	5.40	0.310	0.350	0.353	354	1.100
11	1030	1.010	10.100	8.40	0.377	0.352	0.211	403	1.100
12	1015	1.017	11.800	9.10	0.16	0.311	0.320	600	1.20
13	1057	1.017	9.80	7.40	0.504	0.301	0.100	413	1.400
14	1040	1.010	8.500	5.30	0.320	0.305	0.100	350	1.100
15	1060	1.010	8.320	6.90	0.311	0.356	0.220	389	1.100
16	1088	1.010	6.270	5.10	0.504	0.301	0.158	256	1.100
17	1500	1.01	7.00	6.10	0.400	0.405	0.200	247	1.100
18	1000	1.015	7.30	6.00	0.51	0.370	0.200	367	1.10
Dec 3	920	1.010	8.500	6.00	0.600	0.300	0.100	383	1.100
10	1175	1.010	9.20	7.60	0.600	0.300	0.100	358	1.21
18	Second series of Radium treatments								
24	1000	1.01	9.10	5.50	0.550	0.330	0.200	370	1.00
25	1175	1.010	10.00	9.50	0.600	0.430	0.200	475	3.00
Jan 4	1135	1.010	10.50	8.30	0.595	0.410	0.220	467	2.00
10	800	1.010	4.10	4.20	0.405	0.345	0.177	286	1.400
16	950	1.010	7.20	4.50	0.410	0.377	0.100	256	1.100
19	1040	1.010	6.30	5.10	0.417	0.311	0.10	289	1.200
17	950	1.010	8.20	6.10	0.385	0.300	0.200	292	1.100
19	940	1.010	7.30	5.60	0.400	0.425	0.200	237	1.200
22	1410	1.010	9.00	7.50	0.360	0.300	0.200	300	3.000
26	1135	1.010	11.00	9.50	0.400	0.300	0.200	416	2.000
27	1000	1.010	8.00	8.00	Treatments				
Feb 2	1000	1.01	9.40	8.30	0.600	0.300	0.100	350	2.00
4	1220	1.010	11.40	9.70	0.600	0.400	0.100	448	3.00
8	1020	1.010	10.30	8.60	0.200	0.300	0.100	416	2.100
10	1120	1.010	8.80	8.80	0.300	0.300	0.200	1.900	
12	1190	1.010	8.30	8.30	0.300	0.300	0.200	2.000	
17	1170	1.010	10.30	7.70	0.400	0.400	0.100	331	2.000
19	1100	1.010	9.30	8.00	0.400	0.400	0.100	289	1.000
22	1087	1.010	12.10	12.10			0.100	430	2.100
29	1100	1.010	11.80	9.30	1.300	0.300	0.200	434	2.100
Mar 3	1210	1.010	12.40	12.40	0.400	0.200		320	1.200

he noticed his waist was getting larger. He had frequent nose bleeds in 1915 and 1916 and occasional headaches. His temperature ranged from 99 to 101. In the spring of 1916 he was obliged to stop work on account of weakness, shortness of breath, and occasional cough. He used a moderate amount of tobacco but no alcohol. He denied venereal disease. He had a severe attack of malaria when fifteen years old with relapse which lasted for six weeks. The family history was negative. Physical examination showed the patient to be in a very poor general condition. His bony framework was prominent, there was no glandular enlargement. The heart was normal in size and there was a systolic murmur at the apex and base. The X-ray showed the heart to be slightly displaced by pressure from below but not enlarged. There were a few rales at the

FIG. 2. Case I—Myelogenous Leukemia. Chart of analyses of urine during radium treatment.



lower border of the lungs posteriorly. The abdomen was markedly distended by the greatly enlarged spleen. The skin of the abdomen showed pigmentation, scars and telangiectasis from previous x-ray treatment. The enlarged spleen filled the entire abdominal cavity except a small area in the right flank. At the umbilicus it was 3.5 inches to the right of the median line and on a level with the crest of the ileum was $3\frac{3}{4}$ inches to the right of the median line. Below it extended to Poupart's ligament and above to the seventh space in the mid axillary line. The blood pressure, systolic 117, diastolic 54.

Radium treatment July 12, 1917, 2:35 p. m. 52.5 mc. of radium emanation was used in an applicator 2 x 2 cm.; the filtration was 2/16 inch of lead and 1 mm. of silver and 10 layers of gauze. The skin areas for radiation number 22, were outlined as in Case I. The applicator was applied to each square for six hours. Total number of squares 22. The strength of the radium at the end of the series was approximately 17 mc. Previous to radium treatment the white blood cells varied from 191,000 to 219,000. Treatment ended July 19. At this time white blood cells numbered 124,000.

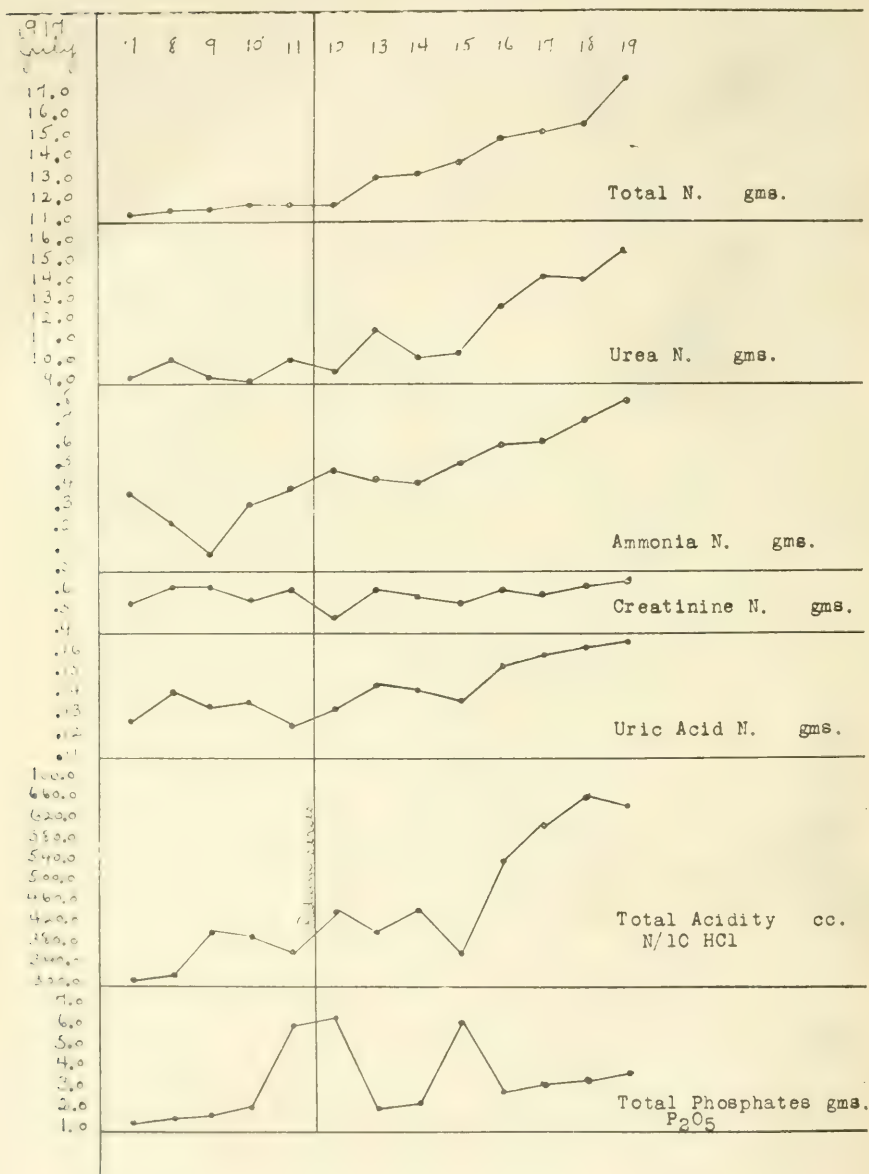
Examination of the blood before, during and immediately following radium treatment showed on July 7, 1917, creatinine 1.5 mgm. per 100 cc., non protein nitrogen was 28 mgm. per 100 cc. July 14, 1917, creatinine 1.14 mgm. per 100 cc., non protein nitrogen 33 mgm. per 100 cc. July 19, 1917, creatinine 1.04 mgm. per 100 cc., non protein nitrogen 30 mgm. per 100 cc. This result shows that there is apparently no change in the amount of creatinine in the blood and possibly a very slight increase of non protein nitrogen during radium treatment.

The chemical examinations of the urine are recorded in the following table and chart Figs. 3 and 4. From the table and chart it is seen that dur-

FIG. 3. Case II—Myelogenous Leukemia. Table of analyses of urine during radium treatment.

Date	Volume	Sp. Gr.	Total N.		Ammonia N.	Creatinine N.		Uric Acid N.		Total Phosphates	
			Gms.	Pcs.	Gms.	Gms.	Gms.	Gms.	Gms.	Gms.	Pcs.
July 7	900	1.024	11.53	8.32	.262	.569	.129		319		1.51
8	1000	1.026	11.61	10.53	.246	.633	.143		330		1.79
9	1000	1.025	11.76	9.43	.090	.639	.137		408		1.88
10	990	1.025	11.91	9.08	.130	.578	.138		396		2.13
11	1210	1.021	11.92	10.29	.408	.624	.126		372.7		2.13
Radium Series											
12	1070	1.022	11.98	9.07	.497	.485	.135		443.1		6.42
13	1370	1.020	13.23	11.64	.452	.621	.146		400		2.15
14	1210	1.024	13.55	10.30	.432	.591	.144		454.9		2.57
15	1070	1.024	13.90	10.48	.521	.576	.139		376.1		6.42
16	1400	1.022	15.09	12.97	.618	.612	.155		543.2		3.08
17	1500	1.020	15.33	14.47	.636	.605	.160		619		3.46
18	1490	1.022	15.80	14.02	.745	.633	.164		603		3.72
19	1640	1.018	17.90	15.64	.822	.655	.167		647.1		3.33

FIG. 4. Case II—Myelogenous Leukemia. Chart of analyses of urine during radium treatment



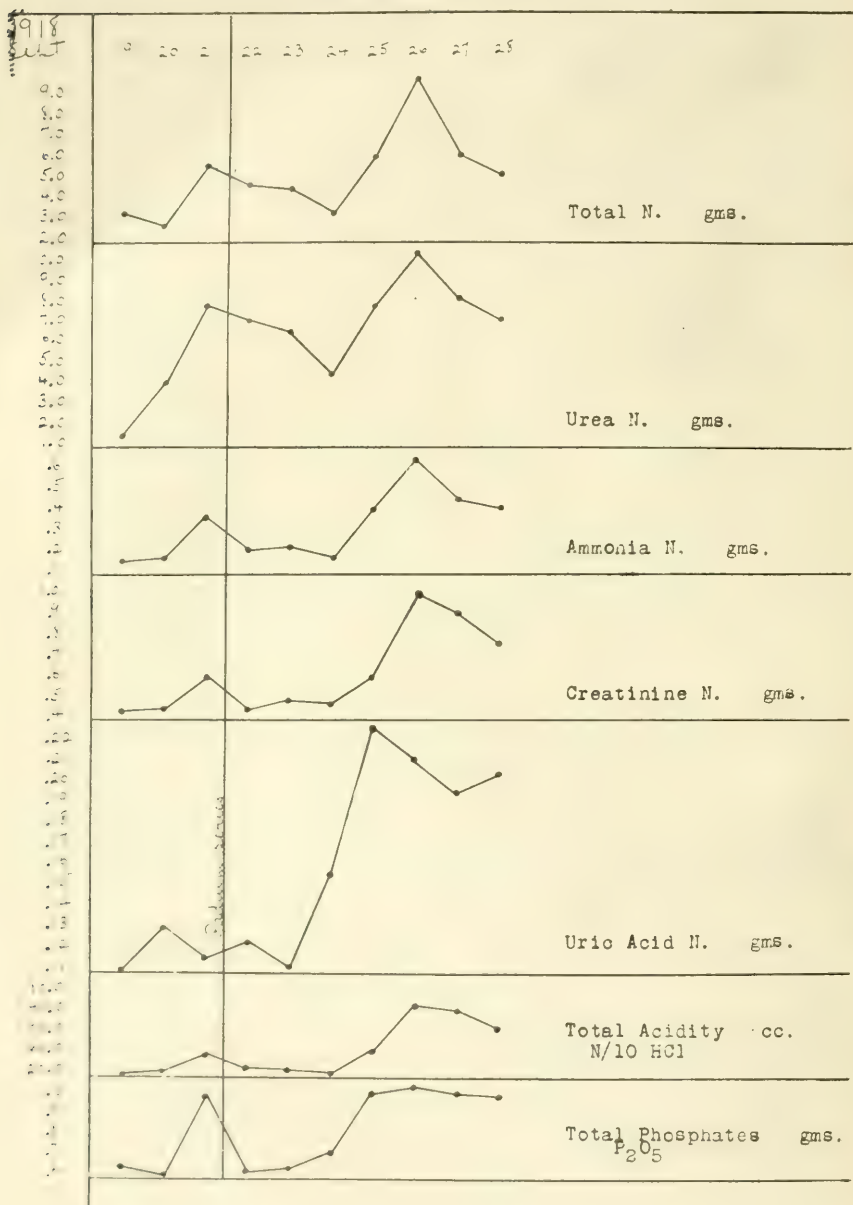
ing radiation there is a very marked increase in the volume of urine. The specific gravity remains constant. The total acidity is enormously increased as is also the ammonia nitrogen, total nitrogen, urea nitrogen. The creatinine shows no change. The uric acid nitrogen is slightly increased and the phosphates are enormously increased. The results, therefore, are in entire conformity with those of Case I, Figs. 1 and 2.

CASE III. Man, 67 years old, married. Seen in consultation September 13, 1918. Patient was suffering from an inoperable sarcoma of the right clavicular region which involved the thoracic wall and extended to the deep structures on the right hand side of the neck involving the cervical plexus on the right causing excruciating pain in the right arm, anesthesia in the distribution of the ulnar nerve of the right hand which also showed trophic changes of the skin of the right hand. The growth also extended in a collar-like fashion around the front of the neck to the deep structures above the left clavicle. Radium treatment begun September 18, 1918, at 2:30 p. m. 102 mc. radium emanation was used. The filtration was similar to that in Case II. The areas of growth above referred to were marked off into 16 squares, each 2 inches in diameter. Radium was applied to each of these squares for a period of 4 hours. The treatment lasted from September 18 to September 21 at 8:30 p. m. inclusive. On the latter day the strength of the radium emanation had become approximately 59 mc. On the same afternoon the patient complained of considerable nausea which was more or less continuous for the next three days. Otherwise, there was no evidence of systemic reaction. Table and chart Figs. 5 and 6 give urinary analyses

FIG. 5. Case III—Inoperable Sarcoma of the Thoracic Wall Extending to Deep Structures of the Neck. Table of analyses of urine during radium treatment.

Date	Volume	Sp. Gr.	Total N.	Urea N.	Ammonia N.	Creatinine N.	Uric Acid N.	Total Acidity	Total Phosphates
								N/10 HCl	P. O.
1918	cc.		gms.	gms.	gms.	gms.	gms.	cc.	gms.
Sept. 19	760	1.019	3.468	1.873	.187	.459	.111	20.6	.66
20	660	1.020	2.993	4.119	.198	.472	.131	23.8	.62
21	960	1.019	5.886	8.005	.384	.611	.116	60.3	1.07
	Radium Series								
22	960	1.019	4.838	7.157	.235	.460	.125	32.4	.65
23	860	1.018	4.743	6.729	.2403	.504	.112	30.9	.66
24	965	1.012	3.512	4.627	.1961	.491	.157	25.4	.74
25	1345	1.015	6.174	8.019	.4164	.619	.228	64.5	1.17
26	2200	1.014	9.993	10.662	.6572	1.110	.214	158.4	1.68
27	2260	1.012	6.201	8.527	.461	.931	.197	144.6	1.43
28	1700	1.013	5.426	7.367	.4392	.780	.206	132.8	1.15

FIG. 6. Case III—Inoperable Sarcoma of the Thoracic Wall Extending to Deep Structures of the Neck. Chart of analyses of urine during radium treatment.



during radium treatment. During radiation the urine was increased very greatly in amount, sp. gr. remained about the same, the total acidity was markedly increased, also the ammonia, total nitrogen, urea and uric acid. The creatinine showed considerable increase as did also the phosphates.

CASE IV. Woman, 68 years old, widow. Entered the Albany Hospital March 30, 1918. Hospital No. 63273. Patient had a carcinoma of the left breast, a post operative recurrence. She had had numerous operations and the recurrence was in the form of a carcinomatous ulcer 5 x 5 cm. in diameter with hard cartilage like edges adherent to the chest wall. The skin immediately surrounding was reddened and the skin of the rest of anterior portion of the left chest showed brownish pigmentation and numerous telangiectases resulting from previous treatment by x-ray.

Radium treatment. Begun April 1, 1918, at 12 m., 64.4 mc. screening 3 mm. of lead on each side of the applicator 2 x 2 cm. in diameter wrapped in 20 layers of gauze. The area to be radiated was marked into 12 squares each 2 inches in diameter. Each square was rayed for 6 hours. There was no constitutional reaction, no rise in temperature or pulse.

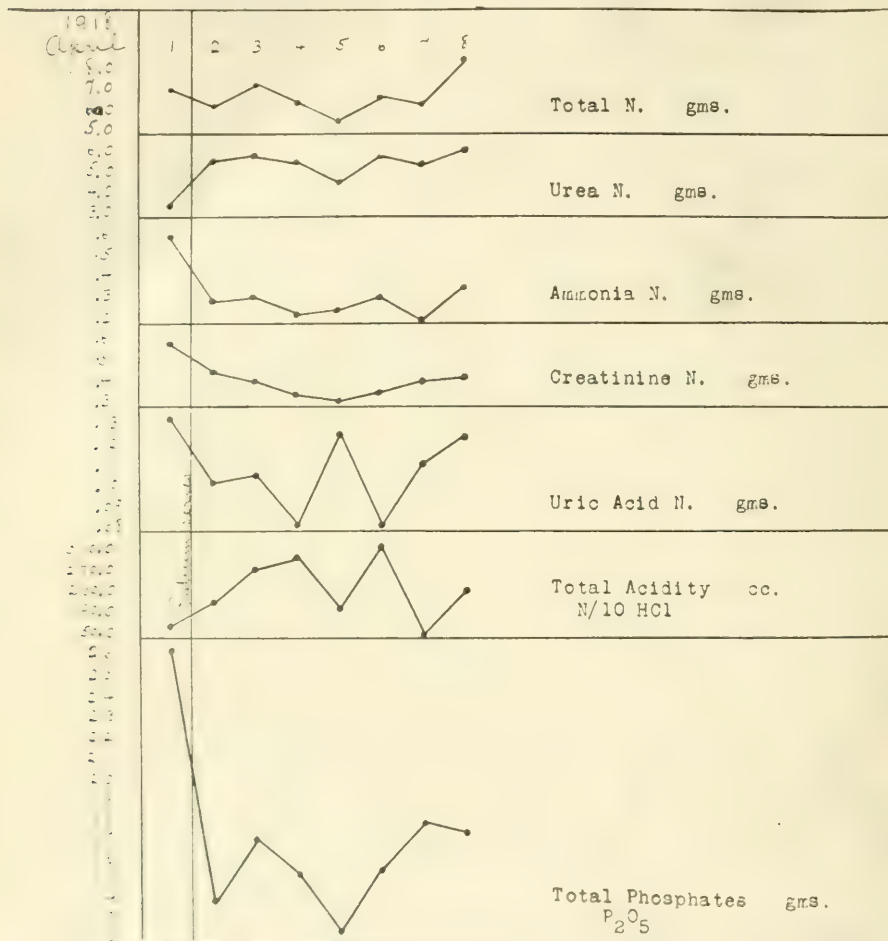
Blood examination before radiation on March 31 showed creatinine 0.57 mgm. per 100 cc., npn. 39.6 mgm. per 100 cc. Blood taken at the end of radiation, specimen was partially clotted. The results, however, showed creatinine 0.35 mgm. per 100 cc., npn. 37.8 mgm. per 100 cc. There is apparently no increase although clotting interfered with accurate determination of the blood.

Urine analysis, table and chart, Figs. 7 and 8 showed no increase in the amount, no increase in sp. gr., moderate increase in the total acidity, no increase in the ammonia, no increase or diminution in the creatinine, no increase in the total nitrogen, phosphates, urea or uric acid.

FIG. 7. Case IV—Carcinoma of the Breast, Post-Operative Recurrence in the Form of Ulcer with Marked Induration. Table of analyses of urine during radium treatment.

Date 1918	Volume cc.	Sp. Gr.	Total N. gms.	Urea N. gms.	Ammonia N. gms.	Creatinine N. gms.	Uric Acid N. gms.	Total Acidity Total HCl		Total Phosphate. P. gms.
								cc.	gms.	
Apr. 1	1220	1.015	7.139	3.751	.614	.605	.135	161.0		2.659
	Radium Series									
2	1050	1.018	6.585	5.899	.307	.491	.105	218.4		1.412
3	1180	1.015	7.505	6.076	.321	.431	.103	373.7		1.733
4	810	1.018	6.645	5.862	.253	.371	.090	231.6		1.556
5	1520	1.011	5.745	4.757	.279	.348	.128	210.8		1.260
6	911	1.020	6.971	6.053	.319	.380	.082	314.2		1.584
7	1184	1.013	6.696	5.723	.260	.417	.114	151.0		1.805
8	1335	1.014	6.647	6.384	.376	.449	.127	232.7		1.767

FIG. 8. Case IV—Carcinoma of the Breast, Post-Operative Recurrence in the Form of Ulcer with Marked Induration. Chart of analyses of urine during radium treatment.



DISCUSSION

It seems evident that the changes in the nitrogenous metabolism depend upon the amount and nature of tissue autolysis. Both the tissue autolysis and the products of nitrogenous metabolism are most marked in the two cases of leukemia, cases I and II. In these two cases also the phosphates show an extraordinary increase due to the nature of the tissue autolyzed. In case III, the sarcoma, the bulk of tissue autolyzed was obviously less than in the cases of leukemia but following radiation there was definite softening and fluctuation of the growth. The nitrogenous products in this case, while definitely increased, were much less so than in the cases of leukemia above referred to. In the case of carcinoma of the breast the lesion consisted of hard brawny fibrous tissue in which one would expect little or no autolysis. In this case, as is seen in the chart, there is practically no increase in the products of nitrogenous metabolism and only a moderate increase in the total acidity of the urine.

From the above it would appear that the changes in the urine, as a result of the radiation of the pathological conditions above referred to, are due in part at least to the products derived from autolysis of the abnormal tissue under the influence of the radiation from radium. The above results throw no light upon the nature of the constitutional symptoms which have been described resulting from the radiation of radium and of the x-ray. Only one of these cases, No. III, showed any systemic reaction because of radiation and in this instance the nitrogenous substances in the urine did not show as excessive increase as in the cases of leukemia which showed no general symptoms of toxemia.

BIBLIOGRAPHY

1. LEVIN, ISAAC: "X-ray and Radium Treatment of Leukemia and Hodgkin's Disease," *Medicine and Surgery*, Vol. 1, 1917, pp. 411-416.
2. ORDWAY, THOMAS: "Occupational Injuries Due to Radium," *Transactions of the Association of American Physicians*, 1915.
3. GUDZENT and HALBERSTAEDTER: *Deutsche medizinische Wochenschrift*, March 25, 1914. No. 13, p. 633.
4. HALL, C. C., and WHIFFLE, G. H.: "Roentgen Ray Intoxication Disturbance in Metabolism Produced by Deep Massive Doses of the Hard Roentgen Rays," *American Journal of Medical Sciences*, 1919, Vol. CLVII, No. 4, p. 453.
5. ORDWAY, HAMMETT and HARRIS: Reported at a meeting of the Boston Society of Medical Sciences held at the Peter Bent Brigham Hospital, 1914.
6. ORDWAY: "Remissions in Leukemia Produced by Radium in Cases Completely Resistant to X-ray and Benzol Treatment," *Transactions of the Association of American Physicians*, 1916.
7. KNUDSON: "A Metabolism Study of a case of Leukemia During Radium Treatment," *Boston Medical and Surgical Journal*, April, 1917 Vol. CLXXVI, No. 14, p. 503.

Clinical and Pathological Notes

Notes on War Injuries of the Frontal Lobe. By HENRY VIETS, M. D.

(From the Neurological Service of United States Army Base Hospital No. 33, Portsmouth, England.)

Extensive injuries to the frontal bone with loss of large portions of the frontal lobes were not uncommon during the war. In glancing through the admirable illustrations of Cushing's* paper on head injury one is struck by the marked preponderance of lesions of the anterior part of the cranium. Many of these injuries were fronto-parietal and not entirely frontal, but it is interesting to note that in the subsequent histories of his series, only one had any marked mental changes. In many the neurological examinations were entirely negative. This is in accord with the experience of Chateline and DeMartel who found, in the numerous cases which they examined, "the symptoms observed arose from complication peculiar to the wounds and not from damage to the lobe itself." In great series of cases like those of Sargent and Holmes in England and of Tuffier and Guillain in France there are recorded remarkably few insanities or even mild mental changes in the frontal lobe injuries. Moreover, it is Purves Stewart's opinion that, "many patients with extensive frontal destruction show no abnormal signs whatever, either physical or mental."

An illustration of this type of injury is seen in the following case report.

COMPOUND COMMINUTED FRACTURE, LEFT FRONTAL AND PARIETAL BONES.
EXTENSIVE FRONTAL LOBE INJURY. SEPSIS. NO NEUROLOGICAL OR PSYCHIC
* "THE JOURNAL OF THE AMERICAN ASSOCIATION OF PHYSICIANS," 1918, 47, 558.

Private S. T., age 22, white, single, a member of the 108th Infantry, U. S. Army, was hit under his helmet by a shell fragment or a machine gun bullet, while walking in No Man's Land early Sunday morning, September 29, 1918. His regiment at that time was brigaded with the British somewhere on the Albert sector, exact place not known. He is not sure just what the missile was that hit him as he was hurrying along with the advance when he was suddenly knocked down. He immediately became unconscious and remained so until a week or ten days later. His field medical card, however, contained the following notes:

* *Continued. British Journal of Surgery*, 1918, 7, 558.



Lateral x-ray showing extensive bone loss and numerous radiating fractures. Plate by Dr. W.

P. Howard, Roentgenologist, U. S. Army Base Hospital No. 36.

1st day of injury: C. C. S. No. 53; "Wound frontal region. Brain matter protruding. 1,800 A. T. serum."

2nd day of injury: Transferred to 3rd Australian General Hospital and following notes made: "T. and T. frontal region. Wound excised, large detached piece of parietal [?frontal] bone elevated by blood evidently from longitudinal sinus. Wash out brain matter." X-ray report, "Very extensive fracture of frontal bone, extending back through parietal on left side. Cannot detect foreign body."

7th day: 1,800 A. T. serum.

14th day: 1,800 A. T. serum.

18th day: "Still incontinence of urine and faeces, no improvement."

3rd week: U. S. Army Base Hospital No. 33, Portsmouth, England.

The following notes were made:

"Well developed, healthy boy, lying in bed with open septic wound of left forehead. Wound 6 by 3 cm., upper border at hair line and inner border on mid line. The base is covered with granulating tissue, pulsating and discharging a moderate amount of pus; there is a healthy growth of skin around the edge of the wound. Pulse, respiration and temperature normal. Answers questions slowly but intelligently but cannot tell much about his illness, except a hazy recollection of crossing the Channel the day before. Remembers vaguely the last days in the Australian hospital. Says he has "no headache and is feeling fine." General impression is one of normal mentality. He is perhaps a trifle shy but seems to be popular with other patients.

"Cranial nerves: No subjective or objective loss of smell. Vision normal, discs show no change, except perhaps a slight haziness of outline of the left. No hemianopsia. No paralysis of extraocular muscles. Pupils equal and react to light and accommodation. No ptosis. Sensation of face normal and muscles of mastication strong and equal. Innervation of both sides of face equal. Tongue protrudes in mid-line. Palatal reflex present. No difficulty in speech or swallowing.

"There is no paralysis or paresis of the muscular system. Muscle tone is normal and there is no ataxia of arms or legs. Reflexes are all active and equal, including abdominals and cremasteric. No Babinski. No complaint pain or numbness. There is no change in recognition of touch, pain, heat and cold, posture and passive movement, vibrations of the tuning fork, recognition of shape, discrimination of weight, compasses or localization. Slight incontinence of urine. No loss of desire to urinate, but control apparently weakened. No incontinence of faeces."

This patient was observed in my ward for six weeks. He was kept in bed for the first three weeks, but after this was up and about the ward in a wheel chair or walking. During this time there were daily dressings of his wound which partly healed over but continued to discharge slight amounts of pus. It was felt that later the wound should be explored with the hope of cleaning up chips of bone and insuring a more prompt

closure, but at this time any operative interference was deemed unwise. A number of careful neurological examinations were made during this six weeks' period, but no signs were elicited other than those demonstrated at the first examination. He was observed and examined for psychic changes, especially defects in memory, attention, judgment, self-control, et cetera. None were noted. He seemed to be a perfectly normal boy, enjoying the daily life of the ward with the other patients.

The roentgenogram shows the extent of the bone loss and the numerous radiating fractures. He left the hospital three months after his injury.

SUBSEQUENT HISTORY.

Twelfth month after injury: U. S. A. General Hospital No. 2. Patient writes an intelligent letter in his own hand. He recalls events in the wards at Portsmouth and shows an interest in other patients. His memory, apparently, is good. "I feel fine now,—but have been operated on twice." Both of these operations were to correct plastic defects. He sends a picture of himself about the hospital grounds.

Thirteenth month: Head healed up and patient on furlough to home.

From both the neurological and psychiatric point of view this case illustrates in a remarkable manner the amount of trauma certain areas of the brain may undergo without disability to the patient. There must have been an extensive loss of brain substance in the anterior pole of the left frontal lobe as the wound was of the gutter type and the earliest notes mention the protruding brain substance and later washing out of brain matter.

The character of the bone loss and numerous radiating fractures is well shown in the lateral x-ray. Fortunately there was no fracture into the frontal sinus, a very serious complication of many frontal injuries. The incontinence following injury in this area has been mentioned by most writers. It is usually temporary, as in this case.

The psychic changes sought for were those mentioned by Archambault* in his very comprehensive paper on "The Diagnosis of Cerebral Tumor." There is most often a loss of moral sense or pleasure in offensive behavior with sometimes loss of memory, attention or judgment. None of these qualities were exhibited by this patient and from letters and observations a year after injury he is apparently quite free from any mental changes.

* ARCHAMBAULT. *Albany Medical Annals*, 1915, xxxvi, 5.

A Case of Primary Sarcoma of the Bladder. By ARTHUR H. STEIN, M. D., Instructor in Surgery, Albany Medical College.

Primary tumors of the urinary bladder comprise from 0.25 to 0.76 per cent of primary tumors of the body.¹ Of the malignant tumors 3.9 to 7.6 per cent occur in this viscus.² During the fifteen years prior to October, 1915, there was 1,702 cases of bladder neoplasm reported in the literature.³ The last series of 369 cases collected by Gardner⁴ is classified as follows: carcino-mata, 178; papillomata, 175; sarcomata, 7; cysts, 4; polypi, 3; fibroma, 1; cystitis cystica, 1. Other forms of tumors reported are adenoma, myxoma, angioma, myoma, lymphoendothelioma, osteochondrosarcoma, rhabdomyoma and dermoid cyst.

Munwes found 107 cases of sarcoma reported between 1638 and 1913. In 1910 he published a series of 32 sarcomata in 719 cases of tumors of the bladder, or $4\frac{1}{2}$ per cent. This figure is generally accepted as fairly accurate.

Sarcomata occur four times more frequently in the male than in the female, and most frequently in the first and after the fourth decades. It is the most common malignant tumor of the bladder in children. Steinmetz reported 13 sarcomata in 32 bladder tumors in children, and Ropitshek reported 40 sarcomata in 97 bladder tumors. The average age is 50 years.

Poznanski in 1914 collected 115 cases of bladder sarcoma. Of 93 cases 23 were pedunculated, 51 broad based and 19 infiltrating tumors. Their size varied from that of a nut to that of an apple. In the 115 cases there was ulceration of the surface, in 7 with consequent severe hemorrhage. The site is usually in the posterior wall.¹¹ Two-thirds of all vesicle tumors occur in the lower one-third of the bladder. Of 74 cases kept under observation, Poznanski found but four lasting cures. Bockenheimer in the same year reported a case which he considered to be cured.

Hematuria is the cardinal symptom, often not present until the case is advanced, especially when the tumor is away from the vesicle outlet. Hematuria is the initial symptom in 75 per cent of cases in adults. When present hemorrhage is abundant, of

long duration, obstinate to treatment, and not dependent on injury or strain. It may disappear quickly and recur after a few days or several months.

Pain is the most inconstant symptom; it may be absent and later severe and constant. Sarcomata nearer the urethral orifice are more painful than those farther away.

Reflex pains due to pressure on the nerves are uncommon and radiate to the thighs, anus, perineum and hypogastrium, and usually occur later. Pain in the bladder is due to cystitis and always present sooner or later.

Disturbances of urination may occur, such as sudden retention or incontinence with pain and tenesmus.

Death is due to uræmia nephritis, septo-pyæmia and cachexia. The last condition is more marked in sarcoma than in carcinoma of the bladder. Left to themselves, death results from hemorrhage or secondary infection of the urinary tract.

The following case entered St. Peter's Hospital on the service of Dr. Elting in 1915. Patient, T. D., age 55, married, occupation, electrician; born in U. S.

The family history is negative.

Personal History. One year previous he was operated on for hemorrhoids. Appetite is good and bowels regular up to the present illness.

Present Illness. During the winter of 1914-15 he had five attacks of colicky pains in the abdomen lasting one to two hours each and extending over a period of two months. There were no other symptoms. On April 10, 1915, he was seized with a chill and compelled to stop work. Within ten days' time he became very weak and lost what he thought to be a considerable amount of weight. Attempts to walk brought on attacks of dizziness, and caused him to walk with the hands outstretched before him to prevent injury in case of falling. About two weeks later a short period of constipation was followed by an obstinate attack of diarrhœa lasting several days. The dizziness subsided, but the weakness became more marked. He entered the hospital on May 26th. Temperature, 98.3°; pulse, 80; respiration, 24. The urine was negative. On May 31st a radiogram showed a "rigid cœcum due possibly to malignancy." With the exception of persistent weakness, loss of weight and constipation, his condition showed no marked changes until June 25th, when he complained of knife-like pains in the lower abdomen on urination increasing in severity. At other times he was fairly comfortable. Tenderness on pressure was limited to the right lower quadrant. The signs and symptoms were considered to be those of appendicitis with the appendix possibly adherent to the bladder.

On July 1st the appendix was removed. It was found to be bound down in dense adhesions to the cæcum and the walls of the latter were greatly thickened and so turned on its antero-posterior axis that it resembled the barrels of a shotgun. The appendix was removed and the gut restored to its normal position. Following this operation the distress on urination continued and increased somewhat. The urine then showed albumen, red and white cells. On July 18th cystoscopic examination showed a "moderate constriction of the membranous urethra and papillomatous proliferation of the roof of the bladder on the left side." A portion of the growth removed through the cystoscope was examined at the Bender Laboratory and reported as "chronic inflammatory material." The pain was now more or less constant and controlled only by morphine. Two applications of the high frequency current were tried in an effort to limit the distress, but resulted in increased tenesmus. On August 3rd the bladder was opened through a suprapubic incision and the wall of the viscus found to be markedly thickened and the lumen to be filled with large masses of soft, almost necrotic material. Lying free in the cavity were large and small pieces of homogeneous yellowish white, very soft, and apparently very cellular tissue. The entire bladder wall appeared to be involved in the process. The loose fragments were removed and the bladder drained through the suprapubic opening and through the urethra. Following the operation the patient continued to experience lancinating pains in the hypogastrium, relieved only by morphine. For two months he grew weaker, more emaciated and exhausted, and died on October 4th. There was no autopsy. Sections of the masses removed at operation were examined at the Bender Laboratory, and reported as sarcoma of the bladder.

The infrequency of this condition in this locality is emphasized by the fact that since 1895 there have been only two cases so diagnosed at the Bender Laboratory.

REFERENCES

- EMILC ROPITSHEK. *St. Paul Medical Journal*, October, 1914.
JAMES A. GARDNER. *Annals of Surgery*, p. 456, 1915.
Zeitschrift für Urologie, 1910, Vol. iv, p. 837.
WATSON AND CUNNINGHAM. *Genito-urinary Diseases*.
HORACE BINNEY. *Transactions of the American Association of Genito-urinary Surgeons*
May, 1914.
PHILIP BOCKENHEIMER. *Urological and Cutaneous Review*, 1914, p. 312.

Correspondence

"THE EVIL THAT HAS BEEN SPOKEN OF
PHYSICIANS."

[EDITOR'S NOTE: The third installment of Dr. CULVER's translation of extracts from Dr. WITKOWSKI's book on "The Evil that is Spoken of Physicians." Other communications from the same source were published in the ANNALS of May and October, 1919.]

SULPICIUS SERVIUS RUFUS, to Cicero.

"Don't be like those evil physicians who, when caring for others, brag of possessing all medical science, when they can't even cure themselves."

PUBLIUS SYRUS

Male habebit medicus, nemo si male habuerit.

With welfare stated in terms of wealth,
The doctor's chances, to fare well, are slim;
The better the state of his clients' health,
The worse it is for him.

Medicorum nutrix est intemperentia.

Our dissipation and its issues
Nourish the doctor's vital tissues.

Crudellem medicum intemperans aeger facit.

To act on 'bout half of the doctor's instructions
As to diet, is likely to make him raise ructions.

Male secum agit aeger, medicum qui heredem facit (1)

A patient who makes his physician his heir
Of being a fool at least has the air.

(1) In a foot-note, Dr. Witkowski, the editor of the French original, says that this reproach has been rendered impossible, in our days, since article 909, of the Napoleonic Code, annuls any legacy made by a patient in favor of his doctor.

SENECA.

Steer clear of the advice of physicians; with as much ignorance as zeal, they kill you in the most officious way in the world.

PLINY THE ELDER

It is true that physicians pretend that, as a matter of fact, we lack remedies in many cases. And that is just the excuse with which they color the use, that they make, of injurious drugs. They even have the impudence to maintain that medicine couldn't get along without poisons. (Book 13).

Nature, that good mother and divine artisan, never made cerates, plasters, antidotes or collyria. Those things are the invention of the physicians, or of their avidity for gain. (Book 22).

SIDONIUS APOLLINARIS (Caius-Sullius, 430-489)

One of Sidonius Apollinaris' witticisms was, that an awkward and assiduous physician kills his patient most officiously.

PLINY THE ELDER (again).

On the uncertainty and changes in medical teaching. (Book 29).

One cannot witness without astonishment, or even without indignation, that no art is less constant nor any more subject to variations than medicine, although it is the most lucrative of them.

The same age, which was that of Nero, saw medicine pass under the laws of Thessalus, who rubbed out all the precepts of his predecessors and roused himself to a sort of fury in declaiming against all physicians who had previously existed. A single trait will enable us to judge of the wisdom and character of this person. He insolently gave himself the title of *Iatronicius* (conqueror of physicians) and had it put as a part of the inscription on his tombstone, in the Appian Way. When he went out in public, he had a more numerous cortege than any pantomime or any conductor of a car. However, Crinas, of Marseilles, who joined to that of medicine the science of mathematics, made for himself a great reputation for prudence and for religion, at the same time. He wouldn't let his patients take any food except at certain times and under certain circumstances, always regulated by the almanach, and, by such means, he acquired still more authority than Thessalus. . . . These two physicians ruled the lives of men, when all at once Charmis, from the same city of Marseilles, took possession of Rome, by condemning not only all physicians who had preceded him but also the use of hot baths:

he even succeeded in having them replaced by cold ones, and during the coldest weather of winter he would have his patients plunged in the lakes. Men of consular dignity were to be seen freezing themselves fashionably and ostentatiously; as to that, we even have the testimony of Seneca. Thus we may see how such doctors, in order to bring themselves into vogue by some novelty, carry on, to spite each other, a kind of traffic in our lives.

Hence the unfortunate debates and contradictory counsels about patients, no one of the consultants wanting to agree with any other or be governed by anyone's else opinion. From that resulted the sad inscription on a tomb, in which it was said of the dead man that "many physicians had caused him to perish." Every day this inconstant and variable art is still changing; we are wafted about, like waves, by all the winds of the charlatans of Greece; for it is evident that anyone among them who has sufficient gift of the gab, at once becomes the absolute arbiter of our life or death; as if there were not thousands of people who live without doctors, if not even without medicine, just as the Roman people lived for more than six hundred years; altho they had never been slow to welcome useful arts, and had even welcomed medicine eagerly, until, after sad experience of it, they condemned it.

Cassius Hermina . . . reports that the first physician to appear in Rome was Archagatus, who came from the Peloponnesus . . .; that he was granted the rights of citizenship and that a shop was bought for him, out of the public moneys; that he was called a *wound doctor*, since that was the branch of the art that he mostly practised. That at first his arrival caused an astonishing amount of pleasure; but that at length his cruelty, in using iron and fire on the human body, got him the name of the *butcher* and brought about detestation of the medical art and all medical men. . . . "These Greeks . . . Every time that this nation brings its attainments to us, it will spread corruption among us, and much more, still, if it sends us its physicians. They have conspired among themselves to kill, with drugs, all whom they call 'Barbarians.' They have made of it a mercenary profession in order the better to gain the confidence of the 'Bar-

barians' and so the more readily to kill them. They count us also 'Barbarians,' and this qualification is, for us, a more serious and more atrocious insult than it is for those other peoples who are uncivilized and gross. I have forbidden you to have anything to do with their physicians."

A portrait of the Greek physicians practising at Rome (Book 24)

The physician is the only artist that is trusted on his own word; he is believed as soon as he says he is a physician; nevertheless there is no art in which imposture has more serious consequences; we don't think of that, so great a charm for us has the hope of recovering health. Moreover, we have no law with which to punish his ignorance, which causes death, no instance of the public prosecutor punishing his boldness. The physician is educated at our expense, he experiments, with fatal results; no one else in the world can kill a man with perfect impunity. He is the accuser instead of the accused; he blames his failure on the patient's intemperance; he allows that nobody but the patient is responsible for his own death. . . . And, at the same time, what profession has committed more poisonings or captured more legacies? What one has carried adultery with more impunity even into the palaces of the Caesars? . . . Shall I speak here of the avaricious requirements and the onerous conditions that they impose on those in peril of death, of the guarantee-moneys that they seek, on condition that they will avert death, and of the secret remedies that they sell to their patients at so high prices. . . . If it's a question of cataract, for instance, they will hold that it is better to couch it slightly, than to extract it, in order that they may have another chance to operate, when it reappears. From all this brigandage, there has resulted what might after all seem to be a public benefit from all these assassins: for though shame could never have obtained it from them, their mutual competition has lessened the price of their remedies and their services.

But let all these facts be considered as personal; let us not ascribe to the art of medicine the ignorance and baseness of that crowd of charlatans who practice it, nor the enormous abuse of which they are guilty, with their patients; nor the hot baths to which they have their clients go, in search of health; nor the

pitiless diet that they prescribe for people who are well; nor the ailments with which they load down, several times a day, men who are dying; the thousand gropings of the doctors, in an attempt to cure the illness that they have caused, and so retrace their steps; and the *régime* which they extend even to the control of kitchens; and the frequent use of perfumes with the purpose of flattering patients with all the delicacies of life. I certainly believe that our forefathers had no experience of the custom of importing foreign drugs, at great expense; and that Cato, when condemning the art of medicine, had, apparently, not foreseen this.

Shall I mention that theriac, compounded as a luxury, that antidote of Mithridates, a confused mass of fifty-four drugs, of all different amounts and some of them in infinitesimal quantity? It is in order to sell it at a higher price that they are so ostentatious about it all and affect such prodigious science—knowledge of whose first elements they are sometimes ignorant.—This is what Cato foresaw in his anger and what resulted in the Senate proscribing, for six hundred years, so insidious a profession, one in which the upright physician serves as a cloak for the quacks. Thus the Senate combatted by anticipation the hallucinations of some sick minds that thought that nothing is more salutary than that which costs a very high price.

. . . The ancients never condemned remedies, as such, but the art that administers them. They were unwilling, above all, that men's lives should be put at the enormous price to which physicians had carried their emoluments. It is claimed that it was for that same reason that, when the cult of Esculapius was admitted at Rome, a temple to him was built, at first outside the city, afterward on an island and that, when the Greeks were chased out of Italy, long after Cato, physicians were specially included among the exiles.

(The foot-note of the French editor, Dr. Witkowski, on the last paragraph, above, is to this effect: In the year 350 from the founding of Rome, ten deputies, acting on the advice of the Oracle, went to get Esculapius, at Epidaurus, to rid the city of the pest. They came back with a serpent, which had issued from the statue of the god; but, on the way, the reptile escaped from the ship, swam up the Tiber and crawled on an island formed by that river. It was this place that the

deputies chose, upon which to build the temple to the god of medicine; this done, the pest ceased at once. That's what the legend says.

Pliny insinuates that the Romans built this temple outside the city for fear of the physicians; but Plutarch's appreciation is more natural; the latter author says that this temple to Esculapius, like that at Epidaurus, was placed outside the city in order that the patients, who came to it for treatment, might have better air than was obtainable inside the city. As to the choice of an island as the site of the temple, Festus explains it by saying that the vicinity of the water was considered very salutary for the patients. American Translator's note.)

Elder Pliny continues to animadvert as follows: "My object, then, is only to finish the work of our forefathers, by putting my fellow-citizens in condition to get along without doctors."—Upon which Dr. Witkowski interestingly notes that: "It would be fastidious to give the innumerable recipes that his chagrined mind disposed him to want substituted for the prescriptions of the physicians that he so unceasingly accused. It's an absurd medley of old women's so-called remedies in which superstition and mysticism often share. For if there be any one reproach that Pliny peculiarly deserves, it is precisely that which he is always flinging at doctors; he credits the most puerile stories and the most fabulous observations, without attempting to prove them and often even without understanding them."

An author whose pseudonym, Plinius Valerianus, seems an

Chirurgus fuerat, nunc est vespillo Dialus:

Cœpit, quo poterat, clinicus esse modo.

Dialus was a surgeon; he became a grave-digger. It was the only way he had of really serving his patients.

Nuper erat medicus, nunc est vespillo Dialus:

Quod vespillo facit, fecerat et medicus.

Yesterday Dialus was a physician; to-day he's a grave-digger; hence he has made no change of occupation.

Hoplomachus nunc es; fueras ophthalmicus ante:

Fecisti medicus, quod facis hoplomachus.

You were an oculist; now you're a gladiator; whichever you work, sword or bistoury, you get the same result.

The druggist Bastien, died of a raging fever. Pity! He deserved to die of a slow fever.

Editorial

And also, in particular, because of the condition of his body, which was afflicted by several diseases, for he had a double tertian fever, and a very sore dysentery, and the special sickness of the host in his mouth and legs. But he would listen to none, and said he should never leave his people, and should make such end as they made. So it happened that owing to the dysentery that he had upon him, it became necessary to cut off the lower part of his drawers; through the sore pain of the sickness of the host, he fainted several times in the evening, as shall be told to you hereinafter.

Joinville's Chronicle of the Crusade of St. Lewis.



Asiatic Cholera and Saline Infusion.

An interesting description of an epidemic of cholera, from the layman's point of view, is given in the *China Press* of August 20, 1919, which carries with it the authority of the resident physician of the hospital, which was almost overwhelmed with the sudden appearance of the disease. It appears that the effect of saline infusions was almost miraculous, and the contrast of the epidemic described with fearful experiences of the past is very striking. The newspaper story follows and is reproduced without modification.

Wusih, August 20.—St. Andrew's Hospital was full almost to over-running, with 65 patients in the wards and practically all the beds full, with the doctors and nurses all busy, and then—suddenly, with no warning the cholera patients began coming in. They came on boats, in rickshas, in chairs, on beds or doors carried by friends; they were brought into the dispensary or laid on the grass outside the gate—some were recently stricken and many, perhaps most, were in the last stages. They could not be admitted into the hospital and infect the other patients and there was no place else to put them.

Once they began coming they came in crowds; the largest day saw 69 patients treated. After treatment they were put back on their boats and kept there at the hospital gate so that the doctors could follow up the treatment or they were placed on the grass plot and watched over by their friends. Then the situation became so desperate that Dr. Lee called the Rev. E. R. Dyer into consultation and with the consent of Bishop Graves, obtained by telegraph, St. Mark's School for Boys, 'only five minutes' walk from the Hospital, was opened as an emergency hospital.

Doctors were obtained from St. Luke's in Shanghai, every one about was put to some sort of work, and from six in the morning till midnight every day for a couple of weeks relief measures went on full blast. No more patients were taken into St. Andrew's and the dispensary was closed, only being reopened again on August 15. Everybody and everything was placed at the disposal of the Emergency Hospital for those afflicted with cholera. To date, something over 535 patients have been treated, of whom 425 have had saline transfusion.

This treatment is the marvel of the age—at least to one who lived here through the plague of 1902 and saw patients die by the tens, and saw a city in which a coffin could not be bought and people were buying the lumber to have carpenters make the coffins in front of their houses. Now, the number of deaths is wonderfully few. Of all this large number only three or four who have come early enough and have stayed long enough have succumbed to the disease; nearly all deaths have been of those who came too late and were practically dead on arrival. Even including those in the number there have not been very many. Some most remarkable cures were effected, which show what the new treatment can do.

One man died just as he arrived at the hospital and the people who brought him laid him down on the open space next door, refusing to take him away at the demand of the owner of the lot. Dr. Lee was called from the Hospital to help, and when he came out felt that the man had some little pulse left, took him in, gave him treatment—and he recovered. Another man recovered so quickly that he stated he was going home—the same day he had come in! This being refused him, he asked for his noonday rice. A further refusal was followed by a request for at least a cigarette—also followed by refusal. A policeman in very bad condition came in, recovered the same day the treatment was administered, went out and did some work, walked a considerable distance and ate a hearty meal. The next day he was back again with an attack that was worse than the first had been. He was brought through, however, and the next time remained in the hospital until discharged by the doctor.

Now, the epidemic seems to have nearly run its course. It began outside the South Gate, went through the city, then outside the North Gate, and recently has been receding into the country at the North of the city. There are only a few patients in the Emergency Hospital, and unless there is a recrudescence it will be possible to restore the School to its normal order and open for school work as usual early in September. The gentry have been interested in having the epidemic met, and subscribed about \$600 for the work of the Emergency Hospital. \$300 has been paid in, and the remainder is on call, but as the smaller amount has not yet been used the call is not made. The small cost is due largely to the generosity of St. Andrew's, through Dr. Lee. It seems really almost like magic that so many lives could be saved, and at so exceedingly small an outlay of money.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

DEATHS FOR THE MONTH OF NOVEMBER, 1919

Consumption	14	Bright's Disease	12
Typhoid Fever	1	Apoplexy	9
Scarlet Fever	0	Cancer	12
Whooping Cough	0	Accidents and violence.....	7
Measles	0	Deaths under 1 year.....	14
Diarrheal Diseases	2	Deaths over 70 years.....	46
Pneumonia	5	Death rate	14.81
Broncho Pneumonia	6	Death rate, less non-res.....	12.17

Deaths in Institutions

	Non- Res.	Res.		Non- Res.	Res.
Albany Hospital.	12	13	St. Margaret's House . .	1	1
Albany Hospital Camp. .	2	1	St. Peter's Hospital. . .	1	10
Albany County Jail. . . .	2	0	Pine Hills Sanitarium. . .	0	1
Home for the Aged. . . .	0	1			
Homeopathic Hospital. . .	2	5		23	40
Hospital for Incurables. .	3	1	Births.		194
Maternity Hospital. . . .	0	7	Still Births.		7

DIVISION OF COMMUNICABLE DISEASES

Typhoid Fever.	7	Tuberculosis.	27
Scarlet Fever.	18	Mumps.	19
Diphtheria and Croup. . . .	17	Pneumonia.	29
Chickenpox.	59	Influenza.	18
Smallpox.	0	Septic Sore Throat.	4
Measles.	4		
German Measles.	2	Total.	225
Whooping-cough	21		

Number of days quarantine for scarlet fever:

Longest. 33 Shortest. 30 Average. 30 8/13

Number of days quarantine for diphtheria:

Longest. 34 Shortest. 11 Average. 21 6/7

Fumigations:

Rooms 256 In Buildings. 40

Milk bottles disinfected. 539

Communicable Diseases in Relation to Schools

	Reported		
	D.	S.F.	M.
Public School No. 3.....	1	..	..
Public School No. 5.....	1	..	..
Public School No. 8.....	1	..	..
Public School No. 12.....	1	..	..
Public School No. 15.....	1	..	..
Public School No. 18.....	3	..	..
Public School No. 21.....	1	..	..
St. Joseph's Academy.....	1	..	..
St. Patrick's Institute.....	1	..	..
Cathedral School.	2	2	..
St. Vincent DePaul's School.....	1	..	..

MISCELLANEOUS.

Cards posted for communi-		Inspections and reinspections	47
cable disease.	29	Vaccinations.	22
Cards removed.	28	Vaccination dressings.	59
Notices served on schools....	144	Children examined for em-	
Notices served on stores and		ployment certificates.	22
factories.	11	Number of employment cer-	
Postal card returns sent to		tificates issued.	21
doctors.	35	Taking specimens of blood	
Postal card returns received		for Wassermanns.	7
from doctors.	28	Taking smears for Gonococci	4

TUBERCULOSIS

Living cases on record November 1, 1919.....	899	
Cases reported:		
By card.	22	
Dead cases by certificate.....	5	27
		<hr/>
		926
Dead cases previously reported.....	9	
Dead cases not previously reported.....	5	
Removed.	5	
Died out of town.....	3	
Recovered.	0	
Unaccounted for.	0	22
		<hr/>
Living cases on record December 1, 1919.....	904	
Total tuberculosis death certificates.....	14	

Non-resident deaths:

Albany Hospital Camp	2	
C. F. L. Pavilion.....	0	
County Hospital.	0	
St. Margaret's House.	0	
City at large.	0	2

Resident deaths.	12
-----------------------	----

Visits to cases of tuberculosis.....	89
Miscellaneous visits.	0
Visits to physicians.	15

LABORATORY REPORT.

Diphtheria.

Initial Positive.	31	Unsatisfactory.	13
Initial Negative.	184		
Release Positive.	28	Total.	372
Release Negative.	116		

Sputum for Tuberculosis.

Positive.	54	Unsatisfactory.	0
Negative.	147		
		Total.	201

Widals.

Positive.	8	Unsatisfactory.	5
Negative.	26		
		Total. ..	39

Meningococcus.

Positive.	0	Negative.	0
		Total.	0
Wassermann tests.	298	Gonorrhoea examinations. ..	67
Milk Analyses.	162	Miscellaneous examinations. .	0
Water Analyses.	0		
Pathological Examinations. .	0	Total Examinations.	1,139

HEALTH PHYSICIAN'S REPORT.

Totals.

Cases Assigned.	34	Calls made.	69
----------------------	----	------------------	----

DIVISION OF SANITATION.

Complaints.	50	Reinspections	89
Inspections.	37	Plumbing.	18
Plumbing.	6	Sanitary.	71
Sanitary	31		

HEARINGS

Hearings.	5	Cow.	1
Cases heard.	7	Rabbits.	1
<i>Class of Cases.</i>		Well.	1
Closet.	1	Filthy premises.	1
Odor	1	Privy vault.	1

Disposition of Cases

Reinspection.	7	Abated.	0
-----------------------	---	-----------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION

Inspections.	108	Smoke.	0
Old Houses.	33	Blue or red.	9
New Houses.	75	Peppermint.	4
Permits issued.	61	Water test.	10
Plumbing.	52	Houses examined.	15
Building.	9	Re-examined.	53
Plans submitted.	20	Valid.	6
Old buildings.	1	Without cause.	9
New buildings.	19	Violations.	0
Houses tested.	23		

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed.	5	Cats removed.	48
Dogs removed.	25		
		Total.	78

DIVISION OF MARKETS AND MILK.

Public market inspections. . .	22	Milk cans inspected	388
Market inspections.	95	Milk cans condemned.	0
Fish market inspections. . . .	14	Lactometer readings.	59
Fish peddler inspections. . . .	0	Temperature readings.	59
Slaughter house inspections..	5	Fat tests.	14
Rendering establishment in-		Sediment tests.	40
spections.	2	Chemical tests.	0
Pork packing house inspec-		Cows examined.	240
tions.	4	Cows quarantined.	0
Hide house inspections.	2	Cows removed	5
Milk depots inspected.	16	Complaints investigated. . . .	4
Stores inspected.	52	Milk houses inspected.	34
Dairies inspected.	34		

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING—*Report for November, 1919.* I.—Number of new cases this month, 381. Classified economically: Free, 245; bed cases, 65; instr. and social service, 24; prenatal, 9; dispensary social service, 31; positive tuberculosis, 11; supervision tuberculosis, 26; hospital social service, 65; venereal, 14. Paid, 136; limited means, 36; Metropolitan, 100.

II. Cases carried over from last month, 975; bed cases, 75; prenatal, 46; tuberculosis, 626; dispensary social service, 0; hospital social service, 144; venereal, 84. Total number of cases carried during month, 1,356. Division of nursing cases: Medical, 128; surgical, 49; obstetrical, 45; prenatal, 18; confinement, 22; 27 mothers; maternity, 5; 26 babies.

II. Visits for nurses, all departments, 2,300; for nursing care, 1,239; for prenatal instruction, 88; for T. B. supervision and instruction, 224; for venereal supervision and instruction, 126; for hospital social service, 210; for general social service including dispensary, 168; for supervision, 60; for other purposes, 194.

III. Source of nursing cases: Metropolitan agents, 72; dispensary, 29; doctors, 57; family or friends, 42; nurses, 23; city charities, 5; other sources, 6; total, 234.

IV. Disposition of cases, discharged and carried. Nursing cases: Discharged cured, 57; discharged unimproved, 35; discharged improved, 93; died, 5; discharged to other care, 17; carried, 90. Prenatal: To maternity care, 20; carried, 44. Dispensary social service: To dispensary care, 26; carried, 5. Hospital school service: O. K. to go home, 35; died, 3; to dispensary, 5; to private physicians, 5; police cases on parole, 3; carried into next month, 158. Venereal: For rest from treatment, 5; as cured, 1; to detention home, 1; to another clinic, 1; unable to locate, 19; carried, 71. Tuberculosis: Died, 5; carried positive, 386; carried under supervision, 112; carried under dispensary care, 160.

V. Number of cases carried over into December, 1,026; nursing cases, 90; prenatal cases, 44; dispensary social service, 5; T. B. positive, 386; T. B. Supervision, 272; hospital social service, 158; venereal, 71.

VI. Dispensary report: No. of clinics held, 86; No. of new patients attending, 178; No. of old patients attending, 690; total No. of patients attending, 868. Classifications of clinics: Surgical, 13; medical, 9; Gynecology, 8; prenatal, 1; eye and ear, 17; nose and throat, 8; skin, 5; pediatrics, 4; venereal, 8; nerve, 4; lung, 4; children's lung, 4; dental, 1.

In Memoriam

MELVIN H. TURNER, M. D.

Dr. Melvin H. Turner, an alumnus of the Albany Medical College of the Class of 1873, died at his home in Ticonderoga, N. Y., on December 12, 1919, in the sixty-eighth year of his age.

Dr. Turner was born in Ironville, and after graduating from the Albany Medical College practiced in the Adirondack region until the time of his death and was recognized as one of the leading physicians of this section of the state. Dr. Turner was at one time President of the Village of Ticonderoga.

ROBERT S. LIPES, M. D.

Dr. Robert S. Lipes, who graduated from the Albany Medical College in 1907, died at his home in Hudson, N. Y., on December 9, 1919, aged thirty-nine years.

After graduation Dr. Lipes practiced first at Athens, N. Y., and afterward at Stottville. He then perfected himself in work upon diseases of the eye and ear, and nose and throat, and engaged in this special practice in Hudson.

The sympathy of the alumni of recent years will be extended to his brother, Dr. H. Judson Lipes, of the Class of 1897, and also to Dr. Myron Lipes, now an assistant physician in the Hudson River State Hospital for the Insane at Poughkeepsie, N. Y.

Current Medical Literature

NEW YORK STATE MEDICAL LIBRARY

Edited by Frances K. Ray

RECENT ACCESSIONS

- Albee, F. H. Orthopedic and reconstruction surgery. 1919.
 Amar, Jules. Physiology of industrial organization and the re-employment of the disabled. 1918.
 Bechhold, H. Colloids in biology and medicine. 1919.
 Bell, W. The pituitary. 1919.
 Bolduan, C. P. and Grund, Marie. Applied bacteriology for nurses. 2d ed. 1918.
 Bowen, W. P. Applied anatomy and kinesiology. 2d ed. 1919.
 Brainard, A. M. Organization of public health nursing. 1919.
 Councilman, W. T. and Lambert, R. A. Medical report of the Rice expedition to Brazil. 1918.
 DeWitt, Katherine. Private duty nursing. 1913.
 Dulles, C. W. Accidents and emergencies. 8th ed. 1919.
 Fishberg, Maurice. Pulmonary tuberculosis. 2d ed. 1919.
 Foote, John. Essentials of materia medica for nurses. 3d ed. 1918.
 Franz, S. I. Handbook of mental examination methods. 2d ed. 1919.

- Fuchs, Ernst. Text-book of ophthalmology, translated from the 12th German ed; by Alexander Duane. 6th ed. 1919.
- Gradwohl, R. B. H. and Blawas, A. J. Newer methods of blood and urine chemistry. 1917.
- Hare, H. A. Textbook of practical therapeutics. 17th ed. 1919.
- Heineman, P. G. Milk. 1919.
- Henry, J. N. A nurses handbook of medicine. 3d ed. 1913.
- Hill, Charles. Histology. 4th ed. 1917.
- Hobson, R. P. Alcohol and the human race. 1919.
- Hollander, Bernard. Nervous disorders of women. 1916.
- Holmes, G. W. and Ruggles, H. E. Roentgen interpretation. 1919.
- Howell, C. A. Series of lectures on surgical nursing and hospital technic. 1913.
- Loeb, Jacques. Forced movements, tropisms and animal conduct. 1918.
- Lounsbury, H. C. Making good on private duty. 1912.
- McCombs, R. S. Diseases of children for nurses. 1916.
- Macfarlane, Catherine. Reference handbook of gynecology for nurses. 3d ed. 1918.
- Macy, J. A. Walter James Dodd, a biographical sketch. 1918.
- Mock, H. E. Industrial medicine and surgery. Saunders. 1919.
- Morgan, T. H. The physical basis of heredity. 1919.
(Monographs on experimental biology.)
- Palmer, M. T. Lessons on massage, including Swedish remedial gymnastics and bandaging. 5th ed. 1918.
- Parker, E. M. Surgical and gynecological nursing. 1916.
- Parker, G. H. The elementary nervous system. 1919.
(Monographs on experimental biology.)
- Parsons, S. E. Nursing problems and obligations. 1916.
- Paul, G. P. Nursing in acute infectious fevers. 3d ed. 1915.
- Peters, F. N. Chemistry for nurses. 1919.
- Pottenger, F. M. Symptoms of visceral disease. 1919.
- Prentiss, C. W. and Arey, L. B.. Laboratory manual and textbook of embryology. 2d ed. 1918.
- Price, G. M. Hygiene and sanitation for nurses. 1917.
- Robb, Hunter. Aseptic surgical technique. 5th ed. 1916.
- Roberts, J. G. Manual of bacteriology and pathology for nurses. 2d ed. 1919.
- Robinson, Victor. The Don Quixote of psychiatry. 1919.
- Sadtler, S. P.; Coblenz, Virgil and Hostmann, Jeannot.
Textbook of chemistry. 1918.
- Smith, A. A. The operating room; a primer for pupil nurses. 1916.
- Truesdell, E. D. Birth fractures and epiphyseal dislocations. 1917.
- Turner, A. L. Sir William Turner; a chapter in medical history. 1919.
- Wright, F. S. Industrial nursing. 1919.
- White, J. R. Chronic traumatic osteomyelitis; its pathology and treatment. 1919.
- Whitman, Royal. Treatise on orthopedic surgery. 6th ed. 1919.

ALBANY MEDICAL ANNALS

Original Communications

THE CAUSES, DIAGNOSIS AND TREATMENT OF IRITIS.

*Read at the Annual Meeting of the Medical Society of the County of
Rensselaer, Troy, N. Y., December 10, 1919*

By JOHN R. SHANNON, M. D.,
New York City

*Mr. President and Gentlemen of the Medical Society of the
County of Rensselaer:*

Before addressing myself to the subject of my paper I beg to thank you sincerely for the privilege you have given me of being present at this your Annual Meeting, and of speaking briefly before you.

Iritis is one of the rather numerous eye diseases which impinge upon the domain of the general practitioner, and one which also frequently comes first to him for diagnosis and treatment. This must be my apology for presenting to you some observations upon a subject, which while familiar and somewhat trite, has in these recent years come under the search-light of advanced methods of investigation, to the end, I think I may say, that its treatment has become more skilful, scientific and exact.

Speaking generally, the causes of iritis are: syphilis, gonorrhoea, rheumatism, tuberculosis, focal infections, diseases of metabolism, trauma.

Infection by the *spirochaeta pallida* is undoubtedly the most common of the underlying causes of this disease, and a conservative estimate would regard probably sixty per cent of all cases of acute iritis as due to syphilis. As a rule, syphilitic iritis is one of the secondary symptoms of that protean disease, and is of a severe type, characterized by pain radiating over the forehead and side of the head, lachrymation, photophobia, intense congestion and disturbance of vision; and there may be nodular swellings projecting from the surface of the iris in severe cases. But it sometimes comes on as a late complication, in which case the symptoms are milder and may only consist of a blurring of the sight and some redness of the globe, with a feeling of discomfort in the eye. Such was the story in the case of a gentleman who came to me shortly after an attack of pneumonia. Under local treatment the eye cleared perfectly in a surprisingly short time, but in six months a second attack came on. I then had a Wassermann test made, with a strongly positive result.

Until comparatively recent times, rheumatism appeared as a close second to syphilis in the list of causes of iritis, but we seldom hear it mentioned now. Some authorities even hold that there is no such thing as rheumatic iritis, and that either the gonococcus or the streptococcus viridans or other organisms found in the crypts of the tonsils, the ethmoidal or sphenoidal sinuses, the tooth sockets or the intestinal tract, will be found to be the causative factor in all of the cases formerly called rheumatic. This view has opened up a large and very interesting field for the investigation of a class of cases which have always been, and, indeed, continue to be, very troublesome to the ophthalmologist. May I mention just two illustrative cases:

A gentleman consulted me in April, this year, with a very mild iritis in one eye. He had had similar attacks frequently for over a year and was getting tired of them. All laboratory tests were negative, but the X-ray showed an infected root cavity upon the same side as his iritis. The patient was a man of action and insisted on having the tooth removed at once. This was done, and he has had no more iritis.

Now look at the other side of this picture: A lady, aged

sixty, consulted me in March. Her right eye had a visual acuity only of counting fingers at two feet—the pupil was contracted, full of exudate and could not be dilated; there was deep circum-corneal injection and the eye was painful to the touch. The left eye was irritable, but the pupil was active and the vision $\frac{3}{8}$. The Wassermann test was negative, the urine showed an excess of indican, several teeth were suspicious, there was a history of constipation. She was first sent to her dentist, who did what he considered necessary to remedy the conditions in her mouth; she was kept in the hospital under careful observation as to diet, correction of intestinal stasis and the consequent septic absorption; with the necessary local treatment of the eye condition; but she made no progress. Instead, there were frequent exacerbations of the inflammation—especially when the weather was rainy and her joints ached—and she left for her home in a remote section little, if at all, improved.

There are, indeed, many cases similar to this, which seem to date from attacks of pain in the joints or muscles—call it rheumatism, auto-intoxication, or what you will—and which are aggravated in cold, damp weather; and it would appear, therefore, as if we might find it advisable to retain the name “rheumatic iritis” at least a little longer.

That iritis is quite frequently caused by infections in the nasal sinuses, or the tonsils, is well established, and tuberculous iritis is also not infrequently met with. I need not detain you with any special reference to these, nor to the iritis following trauma; but I would like to add a few words regarding a type of iritis fortunately not often seen: a chronic inflammation, although the inflammatory symptoms are almost negligible, sometimes mild, again more severe, which is associated with numerous deposits upon the membrane of Descemet, not much pain, sometimes increased intraocular tension, together with the formation of firm adhesions to the anterior lens capsule, occasionally the development of a cataract, and the gradual progress to complete blindness. One case like this, which I had under observation for many months, occurred in a patient suffering from arthritis deformans, but in many instances our investigations as to the cause are fruitless and the patient is apparently in perfect health.

The diagnosis of iritis is not always easy. Many cases are diagnosed as conjunctivitis, and last week a young man called upon me to remove a foreign body which had been blamed by a medical man for the redness and pain in his eye. Generally speaking, there is congestion of the globe, superficially in the conjunctiva and deeply in the circum-corneal sclera. The color of the iris is apt to be altered—it should be compared with that of the other eye—the aqueous humor to be hazy, the pupil to be small and either fixed or sluggish when light is thrown into the eye and withdrawn. There is usually pain, in some cases very severe, dread of the light, a gushing of tears. But to be quite sure of your ground, a mild mydriatic may be instilled into the eye, such as a four per cent solution of cocaine, or a two per cent solution of homatropin; and if the pupil dilates irregularly, but especially if, on dilating, there are seen deposits of uveal pigment upon the anterior capsule of the lens, iritis is surely present.

I saw a case in consultation recently where the attending physician said to me: “There has been no iritis, Doctor, because I have tried both atropine and eserine, and the pupil, after opening up, contracts down again fine!”

Will you permit me to give a word of warning here as to the danger of causing glaucomatous tension by the unintelligent use of mydriatic drugs. Even cocaine has been known to bring on an attack of glaucoma in an eye predisposed to that disease. I recall clearly two cases of persons completely blinded by the continued use of atropine in eyes which had become glaucomatous; and few ophthalmologists have not had similar unpleasant experiences.

In the treatment of iritis—in spite of what I have just said, atropine—the most potent of all mydriatics—is our sheet anchor. Once the diagnosis is made, atropine, in a one per cent solution, should be energetically employed. It paralyzes the sphincter of the pupil and contracts the tissue of the iris, thus reducing the hyperaemia of that membrane and widening the pupil area. It prevents the formation of synechiae between the posterior surface of the iris and the anterior capsule of the lens upon which the iris rests in its undilated state, and it produces rest of the eye

from paralysis of the muscular tissue of the iris. Hot, moist compresses are exceedingly grateful in iritis, and the eye must be protected from the light by means of smoked glasses. If the pain is severe and is uncontrolled by the hot applications, leeches may be applied to the temple. This depletion of the local blood supply has a wonderful effect, not only assuaging the pain but accomplishing a much more complete dilatation of the pupil than was hitherto possible. Dionin, in five or ten per cent solution, is also of value in controlling the pain and helping to break down adhesions. It is advisable to make sure of the free and regular action of the bowels, and, I need hardly add, the entire interdiction of use of the eyes. The diet, too, should be simple. I am in the habit of permitting my patients suffering from iritis which is not too severe to go into the open air when the weather is fine and not windy, and to take motor rides, if in a closed car, but in the more violent inflammations rest in bed and the absence of bright light are to be preferred.

In syphilitic iritis, the character of the anti-specific treatment will conform to the usage of the individual practitioner, although I may express my own preference for mercury. In gonorrhoeal, autotoxic and the other forms of iritis associated with general diseases and diatheses, the treatment, besides being local, will obviously be directed towards the removal of the cause.

Finally, in that most baffling of all types of iritis, the chronic, non-inflammatory variety, where diligent search has failed to discover an adequate cause, where the tension of the globe rises with the use of atropine and often without it, where exudation gradually invades the pupillary space and darkens the vision, where the lens becomes opaque and the vitreous humor loses its transparency, we are indeed in most hopeless plight. General hygienic measures, the strengthening by every possible means of the patient's powers of resistance, and the intelligent use of whatever topical measures may at the moment be advisable, seem to be our only resource, and the *vis medicatrix naturae* our only hope.

SOME REMARKS ON WORK IN AN EVACUATION
HOSPITAL, A. E. F.

*Read at the Thirteenth Annual Meeting of the Third District Branch of
the Medical Society of the State of New York, Albany, N. Y.,
October 9, 1919.*

By JAMES N. VANDER VEER, M. D.

It is hardly to be expected, I trust, in a paper of this nature, to give other than personal experience of cases seen, and deductions made, in an active surgical service of one type of hospital, which was rather out of the ordinary.

This hospital functioned for eight months in its practical set of buildings at Baccarat, Alsace-Lorraine sector, in France, and was designated as Evacuation Hospital No. 2.

While located only six miles from a never changing front, save in one instance, and with its very complete equipment of materiel and personnel it was in reality an advance Base Hospital. One other hospital to my knowledge was placed in the same manner, this being Evacuation Hospital No. 1 at Toul, France, the point at which our American boys made their debut into the trenches.

Both of these hospitals were in a measure experimental institutions and fulfilled their duties acceptably, as was evidenced several times in the bulletins issued from the Chief Surgeon's office.

As a foreword it must frankly be said that a stupendous task was set for the medical department of our army at the outset of the war. How well the task was accomplished is now, and still will be, a matter of later record, statistical mostly, and no single individual can determine, as yet, the exact outcome, nor pass judgment.

The older plans of the Medical Department of the Army were quickly revamped to suit European conditions, yet at best its endeavors were not given time enough, due to the armistice, in which to say truly whether the newly made plans could last under the constantly changing conditions to which they were subjected.

The original plans called for a first aid station immediately with the troops and a dressing station for grouping the cases a

short distance behind, then a Triage of Field Hospitals for operating on non-transportable cases, and with an evacuation hospital, mobile in type, to follow in rear as a second temporary operating hospital before reaching a Base institution, and each was to have a regular quota of equipment and personnel. To these were quickly added, when real action started, mobile hospitals of the French Auto-Chir type, as it was realized that our plan of utilizing an Evacuation Hospital as a unit to be sectioned and sent forward in parts was not entirely feasible when action was lively on its immediate front and the large number of wounded was found to far outstrip the previously estimated figures.

This mobile type of hospital acted as a stop-gap in some instances with, and between the Field Hospitals and the Evacuation Hospital, and in others as an adjunct to an overloaded Evacuation Hospital or group of hospitals.

Additionally were created operating teams made up of a surgeon and two assistant surgeons, two or three nurses, and several enlisted men, with a complete set of instruments; "splint teams," so called, of orthopedic men; and specialist assistants, for despatch where work was thickest, as well as special hospitals for grouping cases for treatment.

Thus it can be seen, to any one who has been associated even a trifle with our army Medical Service, that the ideas were present for the eventual formation and working out, on a large comprehensive American-like plan, for the best care of our wounded.

What then was lacking in this scheme was the coordinating of all branches of the Army in such a brief space of time. And there was plainly shown forth the necessity, that while we as a nation are tending toward military educational training for the youth of our country, we must not neglect to keep the doctor and capable sanitary official in constant touch with army methods and lessons gained in military surgery and medicine from our recent past experience.

This should first be started in our medical colleges and State Health Departments and followed at stated intervals in the life of every doctor in these United States and outlying possessions, whether he will or no, that as a nation we may be prepared for

the next great emergency of whatever nature, local or country wide, which we may be called upon to face.

Also before taking up the actual medical and surgical problems, must be mentioned the means of transportation of wounded from one point to another, for the type of warfare from which we have just emerged calls for a more comprehensive, and more elastic scheme than was used in the American Expeditionary Forces if our percentage of recoveries and return to the line is to be bettered. This may seem axiomatic to some of you, but those of us who have been through the actual experience, especially the medics of the front line and fighting divisions, can recount many individual instances in which service in type, not as seen at present, might have saved a few lives, could these patients have reached a surgical operative unit sooner in their journey to the rear.

France has developed a small group of operating teams with a minimum of equipment, using flying machines, but was unable to perfect the idea so late in the conflict. We should not be backward in perfecting this type of care for our men.

In the main our boys were transported from the field by litter to an aid station and thence to the dressing station, where the ambulances were supposed to come up and obtain their loads.

In many instances this was impossible and further carrying by hand was necessary to a point more to the rear where the ambulances, trucks, or carts were met. To some it has seemed feasible to utilize the motorcycle, with additions, as a means of conveying wounded long distances of a mile or two, thus relieving the services of one, two or three men, who are needed continually at the front to search out and give adequate first aid, and the loss of whom requires much time to replace. Such a scheme has been tried by various nations with many ingenious devices, but it should be for us to develop a light, quickly transportable and universal litter and motorcycle combined, to supersede in great measure the horse-drawn or auto ambulance and Reno litter cart.

As well should be perfected the suggested litter type of airplane for one or more patients.

My experiences and deductions are made from my association as Adjutant of Evacuation Hospital No 2, from its formation

in July, 1917, to my leaving it on December 8, 1918, to command another unit.

For the last eight months of this period the hospital served on the Baccarat sector for the divisions coming in there to be trained, and was prepared, in buildings, personnel and equipment about as handsomely as any of the organizations in the Expeditionary Forces. Approximately some four thousand cases were cared for in this time, of which about one thousand were surgical, two thousand medical, and one thousand gas cases. Of this total number, comprising surgical, gas and medical cases, seventy-three per cent were transferred to the rear; twenty-two per cent were returned to duty, right here at the front, and about five per cent died. Of the mortality the average ran as follows: Three per cent of surgical cases; one per cent gas; and one per cent medical. We saw all types of wounds, which in a large measure depended upon the character of work being performed while the soldier was on duty, and the nature of the weapons used.

The hospital was located six miles behind the line, and therefore, was subject to night bombing raids and to observation on the part of airplanes seeking range for the artillery, but was never shelled, nor bombed directly, the nearest shells falling about a half mile away; and one bomb dropped about one hundred feet from one of our buildings; therefore, the range could be taken into consideration for high explosives, and men were engaged over this six miles of territory in all sorts of work—entrenching, open field work, marching, etc.

In almost every instance it was found the man had been given his diagnosis tag and his antitoxin for tetanus, at the dressing station, three to four miles ahead of us, and it was rather a funny but sad sight to see the wounded brought in with the centers of their foreheads marked with a T in indelible lead pencil. In one instance, at one of the dressing stations the surgeon had evidently lost his pencil, and being unable to borrow one had used ashes and burnt matches to mark this T. Whenever a patient came in without this marking it was our business to find out why the neglect.

I have thought best to divide the wounds into four groupings:

First, the *punctured wounds* in which a missile entered the body and remained in situ; second, the *penetrating wounds* in which a missile entered the body and passed out; third, *lacerating or gouging wounds* in which the tissues were lacerated to a large degree, and contained many foreign bodies; and fourth, the *crushing wounds*, where we saw the accidents resulting from usual civil forms of duty.

As I have mentioned previously in the paper, it would seem feasible to have thoroughly equipped units ready to push forward in an advance and care for the men much more rapidly than they were cared for in the main fighting front, for with patients who came into our institution it was a matter of only an hour at the most, when a man could not be gotten in over the roads or back paths in some manner, in most instances hardly a half hour elapsed when the man wounded or gassed at the front would be in the hospital. In this manner we received all types of patients and could resuscitate, x-ray and operate upon a man in an exceedingly brief space of time.

The following typical cases received by us were treated and recovered: The first type was of a man with ten different points of entrance of missiles all of which remained in his body, and no one of which was smaller than the last phalanx of the little finger. He was removed from the hospital on the eighth day, to the base hospital in the rear, at Vittel, sixty miles away, with practically a normal temperature and pulse, yet having received one of his wounds in the chest, two abdominal wounds, one having penetrated completely through a coil of intestine, the other penetrating completely through the bladder and stopping at the right external iliac artery. The remainder of the portions of shell were in his extremities.

Of the second type of wounds, the penetrating, or through and through, was a case of a German, fifty-six years of age, captured in a raid one night, and who, in limping along, made the unfortunate motion of putting his hand to his abdomen, where he had received one injury. His guard, walking behind him, thinking he was about to pull a revolver and shoot toward the rear—as was several times the case—immediately fired at him with his automatic, the bullet passing through him completely from back

to front, and undoubtedly doing some damage to the intestine. Four more times the same thing happened to this man in the course of the next fifteen minutes and when he was brought into the hospital, in a marked condition of shock, it was found, at operation, he had suffered fourteen wounds of his intestines. Three weeks in the hospital saw him ready for transportation to the base hospital, and able to walk to the ambulance, although very weak.

Of the third type of cases, those of a lacerating character, we saw many due to foolishness in handling hand grenades and the ignorance of a number of our men in handling rifles, automatic pistols and high explosive shells. One case I remember in particular was that of a fine young lad, a college graduate, who was brought in with some four or five other young fellows one evening, and the statement was made that a private, in fun, had pulled the pin of a hand grenade and thrown it in the center of these lads who were talking, with fatal results to two, injuring three others and this young fellow subject to an immediate amputation of his left arm, with death from gas gangrene forty-eight hours later.

Of the other wounds, the fourth type, these were no more or less than the usual types of crushes seen in accidents in civil surgery, comprising all parts of the body, where a soldier would have his leg crushed on a railroad track, or between two trucks, or where an arm or hand would be smashed in unloading goods of heavy character.

Causing the first three types of wounds it might be of interest to name the kinds of weapons which we learned were utilized on the sector opposite us.

Machine Guns—There were machine guns in abundance which usually produced wounds of the lower extremities, save in an occasional instance, such as where a man attempted to rise up from the ground and had his buttocks completely peppered with bullets.

Shrapnel—Although we saw very little of this, and when operating upon such cases found simply foreign bodies of irregular shape and composition. I remember one case brought into the hospital in which we found a lead bullet, round in character.

about the size of the end of one's first finger, and some glass of peculiar shape also in the wound; however, questioning the lad afterwards he remembered he was carrying a bottle of alcohol in his pocket at the time he was wounded, and upon examining the glass a little closer we came to the conclusion the pieces were from this bottle.

High Explosive Shells—By far the greater number of large wounds we saw were due to the high explosive shell, and which in exploding scattered portions of shell out a distance of about eight feet above the ground in a radius of twenty to thirty feet. Here we had to deal with the foreign body, and in every instance it became necessary to extract it. There was one case of death at the second trench line from air vibration, where the shell had exploded only a few feet away from the man and too close to him to cause death by pieces of the shell. His body was unscathed with shell fragments.

Barbed Wire—We also saw many of the so-called barbed wire wounds, being lacerations of the body, when the men went over the top to cross "No Man's Land;" however, in an occasional supposed barbed wire wound we would find foreign bodies and, therefore, we were not inclined to trust to their being simple tissue wounds, crediting the man with a mistake in his description of how he received it, due to the excitement of the moment.

Grenades—The most dangerous of all implements I believe I saw in use at close quarters was the hand grenade, of tin pot, mills, or any type of explosive to be hurled by hand and set to explode in a few seconds after leaving the thrower. Because of the fact that many of the men carried grenades with them continuously (we even had a private come in with two in his hip pockets, having ridden four miles in the ambulance), and as the American grenade needed only to be unlocked by its little tripper, and as so many of the men were unaccustomed to handling grenades, during the latter part of the summer our statistics would probably show an unusually large number of men injured from their own grenades as the more untrained divisions came in. I cited one instance of death from a grenade wound in the hospital in a previous part of this paper. It would not be amiss to cite another in which a grenade was thrown into a small

Estaminet—or drinking saloon—about twelve feet square, in which were seated nine privates, all of whom were brought into the hospital with dangerous wounds due to the explosion of the grenade.

Bombs—My first introduction to the aerial bomb was when our unit passed through Paris on the night of January 23rd or 24th, 1918, it being the first raid the Germans had perpetrated on Paris in two years. It is unnecessary to say that after admiring the pyrotechnic display for only a few minutes the majority of us realized the safest place was underneath the train which would not start to leave the yard until after the railroad ahead had been cleared of the moving trains. At this time large sized bombs were used, as well as smaller ones, and those of incendiary type. About four hundred yards away from the train one of these incendiary bombs started a fire in a large manufactory and we were thus able to get an idea of their frightfulness; however, the usual type of bomb we saw on our sector was the small one, as we dubbed them “the daisy cutters,” being a small bomb that exploded as soon as it struck an object and its pieces shot out sideways very close to the ground. Situated as we were some twenty miles from Luneville, we could at times watch the bombing of that town at night and see the occasional fires that were started in this devilish work. As an instance of the manner in which these were used I might cite an afternoon when an airplane quietly sailed over the small town just three miles away, which was our railhead, and the aviator sighting it over the main street deliberately dropped one bomb every 200 feet until he had exhausted his load of five, then calmly flew down over our hospital, turned about, and despite the anti-air craft barrage flew back over this same street and opening up his machine gun sprayed the whole street of the village. This little escapade netted our hospital twenty-two patients, three of whom died on the way to the hospital, and nineteen were brought in wounded. Of these latter two Frenchmen and one American had chest perforations, were operated upon, the foreign bodies removed, and recovered, and one of the others was lost from gas gangrene, being the sole death of the nineteen living who entered the hospital from this disaster. At another time, however, several

bombs were dropped in the town, and one of them striking the roof of a barracks caromed off, and exploded in the courtyard, killing five men who were standing in the fore part of a small stable abutting on the yard.

Shot Guns—We only came across one wound, a case of what we thought was the effects of a shot gun, and this may have been an instance where the Germans retaliated in the use of shot guns, but, again, it may have been that of a shrapnel wound, as no small shot were identified.

Rifles—In the main the majority of rifle wounds produced a shattered, open or severe laceration of the tissues, due to the many types of bullets that we found and the ease with which the soldiers could make modifications in their individual bullets. Whether we saw the result of dum-dum bullets or not we could not determine, although a close examination was made of each bullet extracted by the surgeon to note if anything suspicious was found concerning it. Every kind of entrance and exit wound imaginable was to be seen, while in nearly every case pieces of clothing would be found along the tract.

We had a few cases of burns from the so-called flame projectors, and about one-quarter of all the cases in the hospital were for gas treatment; and lost ten per cent in the first attack treated. Finally instruction was given to the troops as they would come on the sector, before reaching their front line, regarding their exact line of procedure in case of a gas attack, after which no further cases were lost.

Mortars—The German *Minnenwurfer* hurls a shell weighing 187 pounds a distance of one thousand feet, it is stated in statistics, which in some instances was even too close for the explosion of the shell, except as the elevation was raised, the front lines being so close, but the shells, if timed exactly to explode in the trenches created havoc, as can readily be imagined.

These were the type of mortar wounds we saw and which in general resembled shrapnel or high explosive wounds of the severest grades.

Bayonets—A few bayonet wounds were seen of the penetrating through and through variety which, in the majority of instances healed very rapidly, as the type of bayonet used was a

sharp, clean-cut affair, except occasionally a German saw-toothed bayonet wound was observed, which produced a nasty lacerated wound requiring a long period of time to close.

Trench Knives—By these are meant any type of knives used in hand-to-hand conflict and giving in great measure the type as of bayonet wounds.

Clubbing—As hand-to-hand fighting was occasionally utilized we saw the effects of clubbing in broken bones and crushed heads which resembled in their character nothing less than the lacerations of civil life, and were treated as such.

Treatment. Skull and Scalp—As to the treatment in general of every injury to the skull there was an immediate trepanation if indicated, and irrespective of the portion of brain involved a complete excision of the damaged skull and underlying portions was done; packing of the area was then accomplished and in most instances the Carrell-Dakin solution was started within twenty-four hours. No gas infections were noted in any of our brain wounds but, of course, in the majority of instances they were fatal. Several, however, made good temporary recoveries and were sent back to the base hospital at Vittel after a week or ten days and from occasional inquiry over the telephone they seemed to do fairly well, as I remember them now.

Chest wounds were not allowed to wait but took precedence on the operating table where a wide resection of the ribs was made, the lungs brought out on the chest, as the case might be, with resection of the part affected, and the foreign substances removed; then complete closure of the chest. We thus had no sucking wounds, as are described by the surgeons of Base Hospital groups.

I remember the cases mentioned in the fore part of this paper where three soldiers were brought in with chest wounds, following an air raid, and all of whom made good recoveries, it being our privilege to hold the American until he was able to walk to his ambulance for transportation to the base, also to see one of the two Frenchmen some three months later, for examination. He was very proud of his condition and had returned to the front lines. As I have said, it was not our privilege to see the

so-called "sucking wounds" as we received no cases from operating points further to the front.

This taught me a great lesson in that more bold surgery in civil work, in chest cases, would probably reward us with a larger per cent of recoveries, and I believe this will be seen in the future statistics of the work of our surgeons.

Wounds of Extremities—In the main the treatment of extremity wounds was by extension, using the Balkan frame as a base for rigging up the pulleys and laterals, and by means of many types of splints, chief of which were the Thomas arm and leg splints, Cabot wire splint, and splint wood and splint wire, mesh type, also the bent wire splint which we made, having an excellent enlisted man who could bend the heavy wire and manufacture a splint of any type desired; also of forged iron, for we had a small forge and an excellent blacksmith.

Lacerations—The treatment of lacerations was in the main by means of the Carrell-Dakin solution, although, instead of having a continuous irrigation, our fracture and open wound wards had nurses whose duty it was to go around constantly with a small syringe and inject the solution through the "feeding" tube by means of the fractional method. For the lower extremities we used almost entirely the Blake and Thomas splints, sometimes not even disturbing the latter with which the patient might be dressed on his entrance to the hospital, and only changing the dressings.

Abdominal wounds—Were immediately opened, irrespective of the shock in which the patient was when he entered the hospital, and by means of hot-water bags, which we had in plenty, he was revived, infused or transfused while on the operating table, and later in the ward, thus saving time in every way.

Among these abdominal cases I recall one of resection of a part of the right lobe of the liver, owing to its laceration by a piece of high explosive shell, and which happened only about fifteen minutes distance from the hospital. In this case the x-ray picture showed very plainly the course to be pursued, but the patient unfortunately lived only a week following the operation, then died of pneumonia.

Gas gangrene—I have mentioned gas gangrene in rather a

desultory sort of manner. We had a number of cases, a total of fifteen or twenty, and of these our death rate was about thirty-three per cent. One case we felt sure was saved by the Welch serum, and others on which the serum was used even as plentifully seemed not to be benefited in the least. Strange as it may seem wounds of the buttocks, in which the gas bacillus was found, were considered as most dangerous, and which accords with other hospital reports.

From, as nearly as we could judge, grenade, shrapnel, and shell wounds were always multiple, and always infected wounds.

In some instances our x-ray man did the operation upon some of these patients by means of a long pair of forceps down the tract of entrance, extracting the foreign substance under the x-ray.

Amputations—Here the surgeon practiced conservative surgery to the last degree, and amputation was not thought of in our hospital unless there was absolutely no chance of saving the part. In such cases certain fixed rules were laid down by the orthopedic department of G. H. Q. relative to the saving of muscle for the use of constructive flaps later on, and this we attempted to follow.

Transplantation of Muscle, Bone, or Nerves—In only a few instances was this attempted, but where thought necessary the patient was immediately shipped by ambulance to the base hospital with a description of what was deemed necessary, and how the wound appeared when it came into our hospital. By keeping in touch with the base hospital group we were able to ascertain that the surgeons there could do quite a bit in the repair of tendons and nerves which had been severed, and in the rebuilding of shattered bones.

Eyes—Our eye man had some work in extracting foreign bodies by use of the large magnet, such as we use in the ordinary hospital, as well as doing many other civil operations upon the troops who had been admitted to the service through error by their examining boards. He also did prosthetic and advisory work in the operating room, aiding our surgeons largely in their future plans, or to follow the work of the bulletin, which we

received now and again, from the chief surgeon, on conservative and reconstructive work.

I well remember a case which, however, escaped the operating table, a medical officer who died just as he was being brought in the front door. The history was that he had been struck in the chest by a piece of high explosive shell, some two hours before, but owing to the condition of the direct roads, and the continuous shelling, it had been impossible to get him back sooner. He had been perfectly conscious and rational to within one-half hour of coming to the hospital, but for the last fifteen minutes, coming down the road, he coughed, spat up some blood and apparently developed an oedema of the lungs. Autopsy revealed that the piece of shell had severed the arch of the aorta completely, and that he had bled into his mediastinal and pleural cavities, living two hours with this condition going on.

In general we observed that early and prompt operation, with wide excision, giving room to work in, and to explore every line or branch of laceration for the purpose of removing every bit of foreign substance, irrespective of shock, and subsequent restoration by artificial means, such as heat, direct transfusion, or by saline or gum Arabic solution, were the factors keeping our death rate very low, and so much better than the cases seen in civil life.

In this rather short paper I have attempted to give some idea of the observations made, finding it would be impossible to take up, except at great length, any of the particular features which might be of interest to any one man, but I wish to call your attention to the fact that not a few of the operations I have here portrayed were done by our surgeons while bombs were dropping on the town only a quarter of a mile away, and with the whirr of the enemy avion overhead, and with windows thoroughly darkened, although, fortunately, there were never any bombs dropped directly on any of the hospital buildings.

Clinical and Pathological Notes

Notes on an Epidemic of Cerebro-Spinal Meningitis. By FRED-
ERICK W. MCSORLEY, M. D.

(From the Medical Service of United States Army Base Hospital No. 33, Portsmouth, England)

We had twenty-three cases of cerebro-spinal meningitis at U. S. A. Base Hospital No. 33, Portsmouth, England—the first appeared early in October and the others developed within a period of about two weeks. Ten were females and thirteen were males; seven recovered, two females and five males. With one exception, all were convalescing from influenza and most of them had had pneumonia. They had come from America about the same time, late in September, had developed influenza on the way over and were brought directly to our hospital from the boats. It is unlikely that these patients contracted meningitis from a carrier or an active case while in the Hospital for the reasons that they came from different wards or different parts of the same ward, and that even while they were being treated for influenza the beds were screened and all precautions taken against cross-infection. During the period in which they were under treatment but one case of the disease occurred among the other inmates of the Hospital and this developed in a laboratory technician who was devoting practically all her time to the bacteriology of the epidemic.

After the epidemic started, any patient who complained of severe headache was considered suspicious and was isolated, and if the headache persisted and could not be explained by other causes or if there was any suggestion of rigidity of the neck, a lumbar puncture was done. In this way early diagnoses were made—in many cases before elevation of temperature or abnormal reflexes showed.

As a routine in a proven case, the patient was first desensitized to horse-serum and given thirty to fifty cubic centimeters of serum intraspinaly, followed in a few hours by eighty to one hundred cubic centimeters intravenously; then they were given, daily, twenty to fifty cubic centimeters intraspinaly in the morning, eighty to one hundred cubic centimeters intravenously in the afternoon and twenty to fifty cubic centimeters intra-

spinously late in the evening, the treatment being varied according to indications and the amount given intraspinaly gauged by the quantity of fluid extracted. The average amount of serum used in a case was: intraspinaly, 380cc, intravenously 400cc; the greatest amount given one patient was: intraspinaly 665 cc; intravenously 680 cc. On one patient more than sixty spinal punctures were performed.

At the beginning we had on hand a small stock of Rockefeller and New York State serums, and some Mulford and Lederle Sera were sent to us, but this supply lasted only a short time and we then used the English serum, Gordon's. According to Gordon's system, one of our cases was a Type IV, three were Type I and the others were Type II.

Eight cases were of the so-called Fulminating Type and all of these died in from four to thirty hours. Several of them had apparently recovered from the influenza and had been walking about the ward. They began with violent headache and vomiting, delirium and coma soon followed, and before death, large areas of purpura appeared over their entire bodies. Spinal fluid from one of these patients was sent to Colonel Gordon, R. A. M. C., The British Army Bacteriologist, and he wrote that it showed one of the most virulent strains he had found.

Excluding the fulminating cases, of the eight fatal cases who were under treatment for any length of time, one had apparently recovered from the meningitis when his pneumonia recurred, and three more, each of whom had received more than forty spinal punctures, developed secondary staphylococcus infections of the deep tissues and meninges. The other four lived from four to six weeks, and in two cases the spinal fluids cleared up for a time, but the meningococci reappeared, and the patients grew weaker and more emaciated and finally died, apparently from exhaustion rather than toxemia.

When the Hospital closed, late in December, and the seven patients who lived were transferred to another Base, all of them were walking about and in fairly good condition, though they were still weak and one had a slight strabismus.

An interesting point is that six of the female patients were members of the same Base Hospital Staff and five other nurses

from this Unit developed meningitis after they reached France. In crossing, this group of eleven occupied staterooms near each other and were together much of the time, all of which suggests the possibility of a carrier among them.

The main features of the epidemic were:

1. That all but one of the patients were convalescing from influenza;
2. The failure of the epidemic to spread;
3. The comparatively higher death-rate among the females;
4. The high percentage of fulminating cases;
5. The virulence of the strain of meningococci;
6. The fact that the serum seemed to have very little curative effect.

Editorial

I feel not in myself those common antipathies that I can discover in others: those national repugnances do not touch me, nor do I behold with prejudice the French, Italian, Spaniard, or Dutch: but where I find their actions in balance with my countrymen's, I honour, love and embrace them in the same degree. I was born in the eighth climate, but seem for to be framed and constellated unto all: I am no plant that will not prosper out of a garden; all places, all airs, make unto me one country; I am in England, everywhere, and under any meridian.

Religio Medici.

SIR THOMAS BROWNE.

**Sir William
Osler.**

Admirers of Dr. Osler—for his old American friends find some difficulty with the English title which graced his later years—will read in the excerpt from his favorite writer, Sir Thomas Browne, with which he prefaced his Canadian Medical Association address on "Chauvinism in Medicine," a reflection of his own high ideals and of his sense of the ubiquity and ethical call of his profession.

To his Albany admirers he was rather the intimate friend than the great scientist. He exerted an influence upon the practice in Albany and upon its medical institutions which lasts to the present day, and is still felt as an active element in its work.

Blumer, Elting, Sampson, Winne and Berry, full of affection for their former preceptor, introduced his methods into the renaissance of Twentieth Century medicine. They quoted Osler and they imitated Osler and they proselyted their companions into Oslerism in the movement which did so much to Hopkinsize the school, the hospital and the laboratory of the city of their choice. Then came the great leader himself. Many remember his democratic and cordial greetings when he helped celebrate the anniversary of the hospital in Troy. A little later, the guest of honor at the meeting of the State Medical Society in Albany, he was easily persuaded, during a brief interval of leisure, to visit the college and address the students. Those who heard the few impromptu phrases were impressed with the conciseness with which he was able to impress upon the undergraduates the spirit and promise of medicine.

That was a warning and a prophecy when he said: "There is a strong feeling abroad among people that we doctors are given over nowadays to science—we care much more for the disease and the scientific aspects of it than for the individual. I don't believe it, but at any rate, whether there is that tendency or not, I would urge upon you and your practice in the future, to care particularly for John and Elizabeth, as George Eliot says—but I will not add especially for Elizabeth—but to care more particularly for the individual patient than for the special features of the disease. I am sure all of you must feel, even those of you who have only been a single term in the professional work, that you have entered upon a profession that appeals both to the heart and to the head; dealing as we do with poor, suffering humanity, we see the man unmasked, or so to speak, we see him in his uniform, exposed to all the frailties and weaknesses, and you have got to keep your heart pretty soft and pretty tender not to get too great a contempt for your fellow creatures. The best way to do that is to keep a looking-glass in your own hearts, and the more carefully you scan your own frailties the more tender you are for the frailties of your fellow creatures."

When the Albany Base Hospital Unit reached England in the trying and threatening days of 1918 the first thought of the officers was of their former mentor and friend. There seemed

no effort too great for Dr. Osler's energy. Cutting recklessly the red tape of army and governmental regulations he saved the equipment of the Unit from the confusion of the Transportation service. He answered the call to dedicate the hospital designated by the English government, formally raised the American flag and said:

"Fellow Workers: I have had such a series of thrills during the last three days that my heart is just like a bowl full of jelly. I have been visiting the American hospitals in the neighborhood of Southampton, and as I went into that city I saw three thousand Americans with full packs marching to a rest camp. That evening I saw the Olympic come in with eight thousand troops. A few hours ago I saw the nurses from the Olympic and the staff of doctors at Salisbury Court at the new hospital which is being established there.

"It gives one an extraordinary sensation of pleasure to see how the Americans have come into this war. Now what does it all mean? Why are you all over here? It means the final struggle between two great ideals. There is a saying, you know, by one of the old prophets that 'Where there is no vision the people perish.' But that is not all, for a nation may have a great vision and yet that vision may not be a true one. Germany is a great nation, the Germans are a great people—in literature, in science and in art—but unfortunately for humanity, the vision of late years of the German nation has been one of world domination and the vision of right being dominated by might, and that is the only vision which has obsessed that nation.

"You are over struggling on behalf of an entirely different vision—one that the Anglo-Saxon people have possessed for generations, the vision that made America a nation, the vision which insists that every nationality shall live its own life uninterrupted and that the individual shall be free in that nation just as the nation is free in the community of nations. You are over here fighting for that vision which you have all enjoyed and which the United States has enjoyed in such a remarkable way. You are over here in connection with one aspect of the war. War is a terrible thing; it is a terrible disease in humanity, and you

are over here to minister to the wounds and wants and needs of those who fall, who may be injured and sick in the struggle.

"It is with peculiar pleasure that I come here to-day to float this flag which is the emblem of all that is free in humanity, the emblem that we hope may never be furled until war has been made impossible for evermore, the emblem that we all look to—English as well as American—which indicates, in those memorable words of Lincoln, who has been the teacher of the nations in this great struggle, that it will never be furled until the nations live at peace and unity with each other."

One reads in this striking address the reflection of that great oration on "Medicine in Greater Britain," given before the British Medical Association in 1897, in which he called upon all English-speaking peoples to unite in common thought and effort for the health and good of humanity.

Then he called to his delightful home the officers of the Hospital Unit, and Elting, Corning, Viets, Hawn, Gorham, Davidson and Post were brought under the influence of his hospitality and of his personality, and carried back to their work faith and encouragement for greater effort. Others would have followed had not the armistice suddenly changed the current of activities.

Others will write of the professional attainments and the influence of Dr. Osler upon medicine and allied sciences during the last generation. There will be many references to the broad and far-reaching influences of his thought for the betterment of social and economic affairs. The ANNALS may be permitted to step beyond this formal appraisal and contribute some slight knowledge of his private life and personal characteristics. Among his other beneficences in England was an invitation to his home of a private in the Hospital Unit, and from this visit came a letter descriptive of his domestic life, which reveals one side of the man not apt to be elsewhere depicted. There was a suggestion of the habitual pedagogic tone in which he was accustomed to stimulate and encourage a younger man; but beyond this were the opportunities given for enjoyment and instruction in a visit to classic Oxford, revealing his hospitable concern for



Sir William Osler and Officers of Albany Hospital-Medical College Base Hospital Unit No. 33, U. S. A., at Portsmouth, Eng.

Left to right STANDING: (1) Lieut. Donahue, (2) Capt. Edwards, (3) Capt. Smith, (4) Lieut. Myers, (5) Capt. Graham, (6) Major Hawn, (7) Capt. Viets, (8) Maj. McAllen, (9) Capt. Gorham, (10) Capt. Chiblers, (11) Capt. Schmeisser, (12) Capt. Southwell, (13) Capt. Fear, (14) Maj. Pearson, (15) Capt. Post, (16) Capt. Howard, (17) Lieut. Brown, (18) Lieut. Palmer, (19) Maj. McSorley, (20) Maj. Douglas, (21) Dr. A. Morris Fraser, Med. Officer of Health, Portsmouth; (22) Colonel Childs, British Territorials; (23) Colonel Jennings, British Medical Service, Portsmouth District; (24) Sir William Osler, (25) Lt. Col. Corning, (26) Surgeon General Welch, British Navy; (27) Colonel Routh, British Territorials; (28) Captain J. Lazenby Wright.

what would be most appreciated and most enduring in the memory of his guest, and the environment of learning which seems so appropriate.

Portsmouth, January 25, 1919.

Dearest People:

I'm hurrying to write you of my Oxford trip before I forget details. I returned this morning after a two days' leave, one night at Sir William Osler's in Oxford and the second in London.

Oxford is a dream of loveliness—a perfect dream of old Gothic walls and green walks and windows and pictures, stained glass and ivy, that surpasses all the dreams you dream of loveliness. And considering how brief my visit was, I was able to enjoy it in such a satisfactory way, for the Oslers allowed me and indeed expected me to wander off at my own will.

It's a surprising house—with such a stream of guests, friends of Sir William's. At tea nobody is introduced, in fact Lady Osler doesn't know who half the people are Sir W. has drawn in. He's rather casual about such things—getting people there, and then running off on some other engagement, leaving them to Lady Osler's care, as was the case of a woman doctor at lunch yesterday. Lady Osler has amusing anecdotes of royalty and the Max Müllers. I guessed it—and found it to be true later—that Sir William had forgotten to tell her of my coming. It embarrassed me, but he was so delightful himself, taking me by the arm and inquiring after father and filling gaps with such a whimsical Barrie-like humor (which is very decidedly his) that I couldn't be troubled by any confusion and really there was none. I was given their son's room—who was killed a year ago at Messines Ridge, I think—left just as he had it, Lady Osler said—Many books (everything from "Trilby" to Cardinal Newman).

Then Colonel Harvey Cushing arrived—"Harvey," to everybody here,—Father knows him I believe—he asked after him anyway—also humorous; brown skinned and grey haired and very kindly, and very occupied in cabling home, for he is expecting to go shortly. He and Sir William dined at one of the colleges that night, a dinner of the illustrati; and I dined with the ladies—Lady Osler, her friend, Mrs. Wright (a Canadian), and two nieces.

That afternoon I had a walk, past the Bodleian and Magdalen down High Street, where I was distracted from the more solemn interests by some amazing socks, a pair of which I'm bringing home, quite worthy of the Russian ballet dancer.

Breakfast was at eight-fifteen next morning, and the most absurd thing happened. When the maid called me she took out my suit and shoes for brushing, and she didn't bring them back. What she did do was to leave them outside the door, but I shaved, and finally sat up in

bed reading William Blake until she knocked again to ask if I were up. They were all through breakfast when I got down, and Colonel Cushing insisted on waiting on the private. I told Lady Osler that afternoon that I was late because the maid ran off with my clothes—and it amused her.

I started out at once after breakfast, and first saw Christ Church College, which I liked best of the three—that, Magdalen and New College—that I had time to see. The big quadrangle, built by Cardinal Wolsey and Henry VIII., is very large and has a splendid broad stone walk about it, once intended for a cloister, but which was never covered, thus more open than the others. A garrulous, not too obtrusive, old guide showed me the dining hall, with its magnificent Gothic stairway, and Reynolds and Romneys and Gainsboroughs, and gilded oak and lofty pillars and paneling, with a glorious picture of Henry VIII at the head; and he was such a good diner I'm sure (as well, Sir William says, as the most scholarly monarch ever on the English throne: has written brilliantly on music); then the 800-year-old kitchen where the "cream of the country" (quotes for the guide) still order their morning kidneys and eggs and coffee. On then to the chapel, with its Burne-Jones windows and its old, old Gothic. Another quad, smaller, with what must be magnificent rooms, where the "sporty" crowd live, though Ruskin's rooms were in one corner.

Like the true tourist I hurried down again to Magdalen, with its Water walks, its own dining-hall, and its delightful gargoyle quadrangle. That afternoon again out, I saw New College, with a beautiful chapel with the great Reynolds window. These chapels are large as cathedrals of course, and jammed with "objects of art" we'd build a city around in America—or, we ought to, rather. It occurs to me after all this that you and Father probably came here yourselves and know all my ingenuous thrills and emotions, as well as what caused them. Anyway it is silly to try to describe such a place: it seems rather hopeless to think we must wait 800 years or so before we may hope in America for just such beauty—when intellect ceases to be a bare affair of facts and logic but rather something grown rich with feeling and emotion.

I was to return for tea and to go on the 4:30 to London. On the way back I met Sir William in his cap and gown. He was really very funny, playing with the children on the street, snatching boys' caps, and offering to buy babies from curious sisters for two shillings, six pence. He was quite as capricious at tea, suspected I wrote sonnets and epics and wondered why I wasn't a doctor with such a father, and said he could assure my father I had a very thorough Anglican camouflage. And about his last words, and some way they quite impressed me, they were so unexpected and, perhaps, in a way, cheering to my subconscious doubts, were: "Remember, to succeed: it's not brains that count at your age, it's persistence"—his own rather startling way of mingling these positive assertions with all his by-play.

Altogether I loved my visit—was all enraptured with Oxford and quite grateful to my hosts. They asked especially after Dr. Gorham, and Viets, whom they know well, and they hope to entertain Colonel Corning soon. And I've never-known a house where so much seemed to center: a perpetual inrush of telegrams, and apparently endless complexities of arrangement, getting "Sophy" to Paris, getting husbands transferred to England, nieces over from Canada, and cousins on leave from France. I am sure they can accomplish anything they want, in spite of the "senselessness of army rulings," as Lady Osler says.

He has passed, full of years and honors, and, best of all earthly prizes, rich in the affectionate memories of hosts and hosts of friends. Is there a fitter elegy than the quatrain from Tennyson's *In Memoriam*, which he himself admired?

Who loves not knowledge? What shall rail
Against her beauty? May she mix
With men and prosper! Who shall fix
Her pillars? Let her work prevail.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

DEATHS FOR THE MONTH OF DECEMBER, 1919.

Consumption	11	Bright's Disease	8
Typhoid Fever	1	Apoplexy	9
Scarlet Fever	0	Cancer	18
Whooping Cough	0	Accidents and Violence	10
Measles	0	Deaths under 1 year.....	17
Diarrheal Diseases	3	Deaths over 70 years.....	41
Pneumonia	9	Death rate	16.47
Broncho Pneumonia	9	Death rate less non-residents	13.71

Deaths in Institutions.

	Non-Res.	Res.		Non-Res.	Res.
Albany Hospital	12	10	Maternity Hospital	0	2
Albany Hospital T. S....	0	1	Public Places	1	1
Albany County Hospital	1	0	St. Margaret's House....	2	1
Child's Hospital	3	0	St. Peter's Hospital.....	1	11
Federa'n of Labor Camp	1	0			
Homeopathic Hospital ..	3	7		26	38
Home of the Friendless.	0	2			
Hospital for Incurables.	2	1	Births		183
Little Sisters of the Poor	0	2	Still Births		4

DIVISION OF COMMUNICABLE DISEASES.

Typhoid Fever	2	Tuberculosis	13
Scarlet Fever	26	Mumps	49
Diphtheria and Croup	23	Pneumonia	44
Chickenpox	93	Influenza	15
Smallpox	0	Septic Sore Throat	1
Measles	1		—
German Measles	3	Total	297
Whooping-cough	27		

Number of days quarantine for scarlet fever:

Longest..... 36 Shortest..... 30 Average..... 31 $\frac{3}{8}$

Number of days quarantine for diphtheria:

Longest..... 28 Shortest..... 12 Average..... 16 $\frac{4}{7}$

Fumigations:

Rooms..... 255 Buildings..... 36

Milk bottles disinfected 144 |

Communicable Disease in Relation to Schools.

	Reported		
	D.	S.	F. M.
Public School No. 3.....	2	..	..
Public School No. 7.....	1	..	..
Public School No. 9.....	3	..	..
Public School No. 11.....	1	..	..
Public School No. 15.....	2	..	..
Public School No. 17.....	1	..	..
Public School No. 18.....	1	..	..
Public School No. 21.....	1	1	..
Public School No. 25.....	1	..	..
High School	1	..	..
Holy Cross School	1	..	..
Academy Holy Names	2	..	..
Cathedral School	1	1	..
St. John's School	3	..	..

MISCELLANEOUS.

Cards posted for communi- cable disease	29	Vaccination dressings	42
Cards removed	19	Children examined for em- ployment certificates	26
Notices served on schools...	222	Number of employment cer- tificates issued	25
Notices served on stores and factories	14	Taking specimens of blood for Wassermanns	1
Postal card returns sent to doctors	29	Examinations of dogs for rabies	1
Postal card returns received from doctors	10	Re-examinations of dogs for rabies	2
Inspections and reinspections	38		
Vaccinations ..	15		

Tuberculosis.

Living cases on record December 1, 1919..... 904

Cases reported:

By card	13	
Dead cases by certificate.....	4	17

921

(Three tuberculosis non-resident deaths not reported.)

Dead cases previously reported.....	7	
Dead cases not previously reported.....	4	
Removed	1	
Died out of town.....	1	
Recovered	0	
Unaccounted for	0	13

Living cases on record January 1, 1920..... 908

Total tuberculosis death certificates..... 11

Non-resident deaths:

Albany Hospital Camp	1	
C. F. L. Pavilion	1	
County Hospital	0	
St. Margaret's House	0	
City at large	0	
Child's Hospital	1	
St. Peter's Hospital	1	4

Resident deaths

Visits to cases of tuberculosis..... 89

Miscellaneous visits

Visits to physicians

LABORATORY REPORT.

Diphtheria.

Initial Positive	63	Unsatisfactory	10
Initial Negative	320		
Release Positive	80	Total	583
Release Negative	110		

Sputum for Tuberculosis.

Positive

Negative

Total

Typhoid.

Positive	0	Unsatisfactory	1
Negative	20		
			<hr/>
Total			21

Meningococcus.

Positive	0	Negative	0
			<hr/>
Total			0

Wassermann tests	324	Pathological Examinations .	6
Milk Analysis	43	Bacteriological Examinations	27
Water Analyses	0	Gonorrhea Examinations ...	64
Miscellaneous Examinations.	3		
			<hr/>
Total Examinations			1,272

HEALTH PHYSICIAN'S REPORT.

Cases assigned	69	Sanitary	20
Calls made	119	Reinspections	56
Complaints	34		
Inspections	37	Plumbing	23
Plumbing	17	Sanitary	33

HEARINGS.

Hearings	4	Cases heard	7
----------------	---	-------------------	---

Class of Cases.

Privy Vault	3	Dogs	1
Closet	1	Pigs	1
Plumbing	1		

Disposition of Cases.

Reinspection			7
--------------------	--	--	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION

Inspections	118	Smoke	0
Old Houses	42	Blue or red	3
New Houses	76	Peppermint	1
Permits issued	66	Water test	8
Plumbing	57	Houses examined	26
Building	9	Re-examined	82
Plans submitted	14	Valid	11
Old Buildings	6	Without cause	15
New Buildings	8	Violations	0
Houses tested	12		

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	19	Cats removed	95
Dogs removed	70		
		Total	184

DIVISION OF MARKETS AND MILK.

Public market inspections ...	24	Milk cans condemned	0
Market inspections	118	Lactometer readings	25
Fish market inspections	13	Temperature readings	25
Fish peddler inspections	0	Fat tests	25
Slaughter house inspections.	3	Sediment tests	14
Rendering establishment in-		Chemical tests	0
spections	0	Cows examined	236
Pork packing house inspec-		Cows quarantined	11
tions	4	Cows removed	4
Hide house inspections	0	Complaints investigated	3
Milk depots inspected	17	Milk houses inspected	20
Stores inspected	61	Dairies quarantined for com-	
Dairies inspected	20	municable disease	4
Milk cans inspected	274	Pork condemned	150

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—STATISTICS FOR DECEMBER, 1919.—Number of new cases this month, 285; classified economically: Free, 173; bed cases, 53; instr. and soc. service, 5; prenatal, 19; dispensary social service, 28; positive tuberculosis, 7; supervision tuberculosis, 8; hospital social service, 43; venereal, 10. Paid, limited means, 31; metropolitan, 81. Cases carried over from last month, 1,026; bed cases, 90; prenatal cases, 44; dispensary social service, 5; tuberculosis positive, 386; tuberculosis supervision, 272; hospital social service, 158; venereal, 71; total number of cases carried during the month, 1,311. Division of nursing cases: Medical, 97; surgical, 32; obstetrical, 45; prenatal, 19; maternity, 6; confinement, 20.

Visits of Nurses (all departments): 1,877; for nursing care, 1,115; for prenatal instruction, 59; for tuberculosis supervision and instruction, 118; for venereal supervision and instruction, 117; for hospital social service, 175; for general social service including dispensary, 130; for supervision, 47; for other purposes, 116.

Source of Nursing Cases.—Metropolitan agents, 70; doctors, 39; nurses, 21; other sources, 6; dispensary, 15; family or friends, 37; city charities, 0; associated charities, 1.

Disposition of Nursing Cases.—Discharged cured, 38; discharged improved, 102; discharged unimproved, 30; discharged to other care, 14;

died, 5; carried, 80. Disposition of other cases: Prenatal: To maternity care, 17; carried, 46; dispensary social service: To dispensary care, 23; carried, 10; hospital social service: Discharged home O. K., 17; discharged dead, 7; discharged to dispensary, 9; discharged, private physicians, 1; discharged, police cases, 4; discharged to tuberculosis camp, 1; discharged, left town, 1; discharged to nursing care, 1; carried, 160; venereal, 0; discharged, 1; carried, 80; tuberculosis, 5; carried positive, 388; carried under supervision, 114; carried under dispensary care, 166. Number of cases carried over into January, 1,044; nursing cases, 80; prenatal cases, 46; dispensary social service, 10; tuberculosis positive, 388; tuberculosis supervision, 280; hospital social service, 160; venereal, 80; total, 1,044.

Dispensary Report.—Number of clinics held, 80; number of old patients, 524; number of new patients, 112; total number of patients, 636. Classification of clinics: surgical, 13; children, 9; prenatal, 1; nerve, 3; eye and ear, 15; lung, 3; skin, 4; venereal, 9; nose and throat, 8; children's lung, 0; medical, 6; gynec., 6; clinic, 3. Number of metropolitan calls this month, —; check received for last month's calls, —.

PERSONAL.—Dr. CHARLES S. PREST (A. M. C., '98), Sanitary Supervisor of the State Department of Health, has been appointed Director of the Department of Health Service of the Atlantic Division. He assumed his duties with the Red Cross January 5th. Dr. Prest begins his work under a leave of absence granted by Dr. Herman M. Biggs, State Commissioner of Health.

In Memoriam

ROBERT MASON FULLER, M. D.

Dr. ROBERT M. FULLER died at his home in Schenectady, N. Y., on Saturday morning, December 27, 1919.

Dr. Fuller was one of the most successful and most distinguished of the alumni of the Albany Medical College, particularly from his researches in microscopy and pharmacology. For many years after his graduation he went quietly ahead with his investigations and avoided publicity, but he had quietly and unostentatiously studied out the now universal method of dispensing drugs in tablet form. Few physicians are acquainted with the fact that the small tablets, which form so prominent a part of their equipment, originated with Dr. Fuller. In 1900 he retired from work and took up his residence in Schenectady, the city of his birth, and in 1915 he joined the three other surviving members of his medical class in a semi-centennial anniversary of their celebration, which was held in Albany on May 25th. The occasion was a notable one, because rarely have the class reunions been marked by such a gathering of a remote class. Since his return to Schenectady Dr. Fuller has renewed the interest of his youth in Union College and in the Albany Medical College, and has been a free contributor to the activities of these institutions, more particularly in the establishment of a library for the Chemical Department at Schenectady.

His enthusiasm for his Alma Mater has been revealed by the bequests, and he has given for the Medical Department thirty thousand dollars, the income of which is to be used to assist needy medical students in obtaining their education.

But apart from all these personal and professional activities of Dr. Fuller, there have been incidents in his life of great moment and interest. These were described in a biographical sketch provided for the history of the Class of 1863 of Union College, published at Schenectady in June, 1913, as follows:

He is another one of the Class of '63 who has brought great credit to Union College. He was born in Schenectady, New York, October 27th, 1845. He attended the Union School, Schenectady, studied pharmacy in New York City, then took a chemistry course of five terms at Union College under Dr. Charles F. Chandler, being entered in the Class of 1863. He received a certificate from Dr. Chandler, dated August 12, 1863, of the work done. He graduated at the Albany Medical College in December, 1865. While there he took a special course in toxicology, and invented the method of using the photographic camera to aid chemical analysis. He made photographs of the octahedral crystals of arsenious acid, which were afterwards used with effect in a notable trial for murder by poisoning. Dr. Fuller developed this use of the microscope and camera and applied it to the study of bacteria and other micro-organisms. He was a pioneer in this field and gained a national reputation. While a student in Dr. James H. Armsby's office in Albany, he was Dr. Armsby's assistant in surgery in the Ira Harris United States Hospital at Albany. Many of the photographs which he took of wounds have been used as illustrations in the official Medical and Surgical History of the War. While thus employed he was sent to City Point, Va., to bring home a wounded officer. On his way there he stopped a day in Washington, and, as it happened, he attended Ford's Theater the night President Lincoln was shot. He had seen Lincoln enter the box, followed by Major Rathbone and Miss Harris of Albany. The audience cheered the President. Soon a puff of smoke, a man jumping from Lincoln's box to the stage, tripping and falling to the stage floor, rising and shouting "Sic Semper Tyrannis, Revenge for the South," then turning to the stage entrance, which was filled by actors and actresses coming on the stage, he waved his knife in the air and literally cut a passage for himself and was gone. Meanwhile cries of "the President's shot" rang out, and from the audience cries of "Kill him! kill him!" Great confusion ensued, with fears of other murders and through the night exaggerated reports on every side. Fuller slept none that night. It was a tragic experience, and there are few living who saw it. His pass to City Point is dated April 15th, 1865. There he found the officer he sought, too sick to be moved, so he was detailed in the 6th Army Corps Hospital at City Point for nearly a month, and had some insight into surgical methods at the front.

In October, 1866, Dr. Fuller settled in New York city, and later on 42nd street, where he practiced for forty years. In 1878 he had invented

a new system of preparing drugs in the form of tablet triturates to secure accuracy of measurement. On February 21, 1878, he gave the results of his investigation in a paper read before the New York Academy of Medicine, entitled "An Easy, Economical and Accurate Method of Dispensing Medicine in a Compact and Palatable Form." This paper was published in the *Medical Record* of March 9th, 1878. This invention has been adopted by all the leading pharmacutists of today. Dr. Fuller's work was recognized by his appointment as a delegate to aid in revising the United States Pharmacopoeia.

In an editorial in *New Remedies*, March, 1878, the editor says: "Dr. Fuller's method of subdividing remedies so as to enable them to be administered in an agreeable form, and in uniform and adjustable strength, with the least expenditure of labor, appears to be a step in advance of previously known pharmaceutical methods, and like some other inventions of practical utility, surprises us by its simplicity and makes us wonder why it was not suggested long ago."

The *American Druggist* in January, 1887, quotes Dr. Fuller in the *Medical Record* of March 9, 1878, and March 25, 1882, and says: "The method of making tablet triturates was originated by Dr. Fuller, who has very generously given it to the public and voluntarily denied himself the very considerable income which would have resulted from a patent right."

In a communication from Sharpe and Dohme, Dr. Fuller is called "The Father of Tablet Triturates." In fact his work has been recognized and adopted by many pharmaceutical associations and manufacturers both here and abroad.

In regard to his foundation work and study in the Union College Laboratory, Dr. Fuller said recently: "If I live fifty years more, what I learned there would give me plenty to do." In 1862 he was Treasurer and Librarian and in 1863 Vice-President of the Chemical Society of Union College. A few years ago he returned to Schenectady where he resided in the old homestead at 12 N. Ferry street. He attended the 50th reunion of the Class of 1863.

Current Medical Literature

NEW YORK STATE MEDICAL LIBRARY

Edited by Frances K. Ray

RECENT ACCESSIONS.

- American Hospital Assoc. Transactions. v. 20, 1918.
- American Laryngological Assoc. Transactions. v. 40, 1918.
- Barton, G. E. Teaching the sick. 1919.
- Carey, H. W. Textbook for nurses in bacteriology. 1918.
- Eddy, Walter. Reproduction and sex hygiene. n. d.
- Ergebnisse der physiologie. v. 16, 1918.
- Fisher, Irving. Effect of diet on endurance. 1918.
- Grenfell, W. T. Labrador doctor; autobiography. 1919.
- Hartridge, Gustavus. Refraction of the eye. 16th ed. 1919.

ALBANY MEDICAL ANNALS

Original Communication

THE PROS AND CONS OF RADIUM.

Read before the Medical Society of the County of Albany, January 13, 1920.

By DOUGLAS C. MORIARTA, PH. G., M. D., F. A. C. S.,

Saratoga Springs, N. Y.

Mr. President and Gentlemen:

I wish to express my very great appreciation of the privilege of presenting a paper before your society. Your president was good enough to ask me to speak on radium. After some thought, I decided that an impartial review of my own cases, with the results of their treatment with radium, would offer grounds for a more free discussion than if I were to attempt to give you a review of the work of other men in the same field. I must beg your indulgence for the length of my paper as a brief mention of the clinical conditions I have treated is essential for your personal estimation of its results and value.

I have not used the word cure in speaking of my results as the present day surgeons have decided that a case of malignancy must remain negative for a period of five years before a cure is conceded. The cases which I shall present were selected to emphasize or corroborate the thought in mind. I have not attempted to present any (formulated) conclusion concerning the value of radium as a therapeutic agent as deduced from my clinical work. My purpose is to give you a word picture of each case in so far as I can, and have you draw your own conclusions. In this way you will be able to compare it with

other measures which you are in the habit of employing in meeting malignancies and their complications.

I am not a fanatic on the subject; I think of it as I do of any other remedy, which presupposes a knowledge of the physiological action of the drug, and the adaptation of such action to the case in hand. Radium came into my practice accidentally. It was used when a member of the family had a carcinoma of the breast. She had kept her secret until the condition would be characterized as hopeless. It is enough to say that in addition to the breast involvement, enlarged glands completely filled the axilla. The breast was removed and the axilla cleaned out. Radium was employed in and about the wound most thoroughly. This was four and one-half years ago, and there has been no return of the trouble.

Radium is not a specific, neither is it a fad. Its action is not indefinite nor are its effects accidental, except as we may accidentally employ it correctly in conditions whose pathology we have not determined. However, its place in therapeutics is becoming more definite as its action is better understood, and there is no question that it has come to stay. The sooner the profession realize this, and inform themselves of its uses, the less often will their patients, who are afflicted with malignancy, learn of its value elsewhere. This statement to the profession is pertinent, as I have had many more cases come to me for radium treatment of their own initiative, than I have had referred to me by physicians.

However, my own standard for the application of curative measures was formulated many years ago in my surgical work; it has stood the test of time and has proved most satisfactory. I never do elective surgery unless I would do it under the same conditions, in my own family; and I see no reason to depart from this decision when suggesting radium as a therapeutic measure. Now, if the medical advisor possesses a clean-cut knowledge of the value of the different measures applicable and is sure of his diagnosis, it should not be difficult for him to differentiate his remedies and decide upon the one he would wish used if he were a patient. If some such reasoning or method of procedure is not employed and the action of radium does not come up to his expectations, it is no more open to censure, than

surgery would be if the operator erred in his diagnostic judgment and the success anticipated did not follow.

But just what is the dependable status of radium as a therapeutic agent? The optimist will tell you that it is a wonderful, even marvelous, remedy; and the pessimist will tell you that it is absolutely undependable. Personally I can sympathize with the views of both because of my own experience. Their different opinions are not chargeable to radium but to the fact that we have not yet learned, or at least I have not, the exact art of its application.

To illustrate: take epithelioma of the lip of which I have had many cases which actually seemed to fade away one after another. Then came (almost simultaneously) two cases for treatment which seemed macroscopically identical with the others, but which resisted all treatment with radium, and it became necessary to resort to surgery.

Miss S., 60 years old, a pastry cook, referred by Dr. Palmer of Saratoga with a primary carcinoma of the labium, refusing surgery. The condition seemingly localized, was easy of access, and in my opinion an ideal case for radium treatment. Radium was employed, but was of no avail except for the relief of pain, the condition grew worse and the patient died.

Mrs. B. of Gloversville was referred by Dr. Wilson of Johnstown for radium treatment. The patient, 80 years old, had an epithelioma involving the inner third of the lower eyelid, of two years' duration. Radium was used and the result was prompt and satisfactory. After one year the condition returned and resisted radium treatment.

Mrs. C., age 60, housewife, came to me for a growth just over the left malar bone, also one in the roof the mouth, one inch in diameter. Diagnosis a probable sarcoma of the antrum. Applied radium, using the cross fire method. The growth in the mouth promptly vanished, while the outer condition considerably decreased in size. With this success I dreamed of permanent relief, so increased the dosage of radium in a single instance from twelve to twenty hours, only to have a virulent toxemia develop. The patient became comatose and died after two days. Typical uremic appearance, though there was no albumen, and the quantity of urine was normal, as was the specific gravity.

Miss A. O., referred to me by Dr. Branan of your city, July 8, 1918, with this note: "Miss O. presents a metastasis of a melanotic sarcoma of the skin and cervical glands for which surgery offers no relief. Would you advise radium?" After three treatments the ulceration entirely healed.

I am informed remained so; though January 13, 1920, there was a return in the abdominal walls.

Dr. Beebe referred Mr. C. to me as a hopeless case, unless radium relieved him. The letter which Dr. Beebe brought will give you an idea of his malignancy and condition.

Letter:

AUGUST 5, 1919.

Dr. FRANK BEEBE,

Johnstown, N. Y.

Dear Doctor.—In the absence of Dr. Edgar I saw Mr. C. to-day. The laboratory report on the tumor removed was, as you will recall, melanotic sarcoma without pigmentation. This is a very malignant type of new growth and in his case it has surely spread rapidly. The only thing to do for him, as far as I can see is to keep him from suffering. He is not a case for further surgery or will X-rays do him any good.

I feel that we can hold out nothing.

Sincerely yours,

(Signed) ARTHUR M. DICKINSON.

Words will not adequately picture the case to you. The shoulder front and back, was three times its normal size, the supra-clavicular glands as large as hens' eggs, his arm swollen with lymphoedema so that just above the wrist it was thirteen inches in circumference. He was a physical wreck and utterly discouraged, realizing that death was imminent unless relieved by radium. After two applications of radium the growth disappeared like snow in hot water. Now (after six months) one would need the incision scars to tell the shoulders apart. The pain has gone and his morphia has been abandoned.

R. W., age 18, student at Syracuse University, developed a large painful callus at the metatarso-phalangeal joint of the great toe. It was agonizingly painful at all times, and she was sent home for surgical relief. From examination I concluded it involved the joint and I feared permanent lameness might result from surgery. I suggested radium. After two applications, the callus disappeared and she was completely relieved.

Mrs. S., age 79, referred to Dr. Comstock for treatment, who in turn referred her to me. The patient's left breast was a huge necrotic mass, bleeding profusely at each dressing, with an odor that necessitated her isolation; the pain was constant, requiring the use of morphia. Radium was used at intervals during a period of two months, when she was returned to Dr. Comstock for operation; she was in fair condition; pain, odor and hemorrhage entirely gone, the breast reduced in size approximating to normal, with only an ulcer one inch in diameter remaining. Dr. Comstock then operated, the irradiation continuing, and now two years after the operation she seems well and is surely happy.

Mr. W., aged 58, was brought to me by Dr. Rogers of Bolton, May 11, 1918, with a growth as large as a duck's egg on his forehead with the following history: Dr. Wilson of Bolton removed a growth in August, 1917. October of the same year, Dr. Allen, Dr. Vander Veer's associate, removed it a second time. In December of the same year Dr. Frasier of Horicon removed it a third time, this time with caustics. At the time he came to me in June, 1918, he was worse than ever, to use his own expression. Radium was used and the growth was gone for the fourth time, after five weeks, not to reappear up to the present time, January 4, 1920.

Mr. S., age 63, referred November 8, 1917, by Dr. Stanton of Schenectady, for radium. The growth was enormous, entirely filling the angle of the neck and extending down to the clavicle. It was a foul smelling, necrotic mass, bleeding profusely and sometimes alarmingly when the dressings were done. The patient was in constant pain, requiring a large amount of morphia daily. I tried to discourage his family from further treatment but they urged the application of radium. The relief was unbelievable and prompt, the growth diminished in size, the discharge, hemorrhage and pain ceased, morphia was abandoned. He lived thirteen months, remarkably comfortable, to die of mediastinal metastases. He brought a laboratory diagnosis of carcinoma.

Mrs. C., age 65, referred June 29, 1919, by Dr. King of Saratoga. This patient had been referred to Dr. King for X-ray treatment, which he stated could do nothing for her. We found the rectum from the sphincter as far as we could palpate filled with carcinomatous tissue. Radium was employed, one treatment of twenty-four hours being given. She had a stormy experience, first a violent reaction and second a rectal tenesmus persisting for six weeks. However, she came around in good shape and now, January 4, 1920, the rectum is absolutely free by palpation from any pathological tissue.

The action of the radium in each of the above instances was the reverse of my expectations; those I expected to get better, did not, while those which I naturally thought not remedial by any measures, responded to an amazing degree. From such results it is easy to see why one who has seen only a few cases of radium treatment might easily be prejudiced, either for or against it.

I have always maintained that surgery is the procedure of choice in treating malignancy, when the condition is localized and in accessible regions, and my radium experience emphasizes the correctness of this opinion. To this there are the following exceptions. Radium should be used in

First, Unjustifiable surgical risks;

Second, When the patient absolutely refuses surgery;

Third, In epithelioma or senile keratitis about the eyelids, nose and ears, for the following reasons: because it has proven itself equal to surgery in these conditions, and because successful surgery must be broad and necessarily mutilating or there is almost a certainty of its recurrence, and disfigurement about the face is most objectionable to all and is consequently a factor entering into our decisions;

Fourth, Uterine hemorrhage in undeterminable utero-pathies, as typified in the following case:

Miss P., seamstress, age 41, came to me in July, 1918. Was of slight build, had always been regular, menstruation of the twenty-one days type. Her statement was that she had been all right until a few months previous, when her periods lasted fourteen of the twenty-one days. At her March period she had a severe hemorrhage and her family physician sent her to a Troy surgeon. He promptly curetted her and she was relieved for a period of five weeks, when the flooding again occurred. She returned to the surgeon and he repeated the curettement, this time with only three weeks' relief. Now, however, the flow was not profuse, but had been continuous up to the present time. She again saw her surgeon and he advised her going home, to be built up, after which he would do a hysterectomy. It was so apparent that unless the cause of her present physical weakness was relieved, not only would she not regain the strength desired, for a hysterectomy, but that she was slowly but surely dying (to use her own words). It was at this time that Dr. Mount of your city referred her to me. She had lost the little flesh she possessed, was absolutely colorless, pulse rapid and weak, and tired so easily that it was only with the greatest effort she was able to come to Saratoga.

After the fourth radium treatment, hemorrhage ceased, not to reoccur, she has improved generally, taken on her former flesh and well-being and is working steadily at her sewing, January 2, 1920.

Fifth, In tubercular glands, my results have been ideal, all of them being promptly relieved. Miss L., age 40, came to me with enlarged glands filling the angle of the neck down to the clavicle, truly an exaggerated case. After two applications of radium the condition became normal in appearance and remains so, January 2, 1920.

Sixth, FIBROIDS. As you are aware, Drs. Kelly and Burnham believe radium to be almost a specific in uterine fibroids: while Dr. John C. Clark of the University of Pennsylvania classi-

fies it as a justifiable measure, in preference to surgery, in small fibroids of the uterus, up to the size of a three months pregnancy when there are no accompanying inflammatory conditions.

If radium as a therapeutic agent in malignant or benign conditions, is to be studied by discussion, there are three definite and distinct fields which must be differentiated:

First, Its use as a primary measure instead of surgery;

Second, As an adjunct to surgery;

Third, As a palliative.

The first question is the one that demands judgment and decision for the life of the patient hangs in the balance. As an adjunct to surgery, or as a palliative, there is no question as to its clinical value, not as a cancer cure, but as a Heaven-sent blessing for cancer victims. Here its positive advantages stand out and cannot but be most convincing. Its action is unique, its results marvelous; it is easy of application, does not mutilate, has no contraindications with our present day knowledge, and can be used regardless of the physical status of the patient. It controls the pain, hemorrhage, discharge and odor from necrosing growths, thus improving the social status of the patient and giving cheer and hope, to a degree, difficult to conceive, unless seen.

To convey to you the value of radium as I have observed it, as an adjunct to surgery or as a palliative, I shall again ask your indulgence while I read a few concise histories.

Miss C., age 72. In October, 1915, a suprapubic operation was done for a growth in the uterus. She came to me in July, 1917, with the history of having had a bloody discharge for two months. The cervix was dilated, curetted and two applications of radium made. In November, 1919, upon examination the parts were normal. Perhaps it would be of interest to know that the report from the pathologist was "malignant papilloma."

Mrs. R., housewife, age 78, was referred to Dr. Comstock November, 1918, to remove a sarcomatous growth from the inner angle of the scapula. It had been operated on twice previously. I irradiated around the growth previous to the operation. Dr. Comstock then operated and the irradiations were continued. She recovered, and December, 1919, is all right.

Miss G. B., age 51, referred to me June 2, 1918. Her physician said she had had a lump in her breast since October, 1917, and had absolutely

refused surgery. In January, 1918, it had become painful. When she came to me she was suffering from a nervous condition, and had a sub-acute parenchymatous nephritis. She wished me to try radium. We made five applications of radium, and when she presented herself in August, 1918, the breast was normal to palpation.

Miss S., age 51, seen at the Saratoga Hospital through the courtesy of Dr. Humphrey. Present condition extremely emaciated, septic, bed-ridden, not able to walk or stand; complete procidentia. The uterus, four by six inches; the cervix everted so that it had the appearance of a large cauliflower, five inches in diameter. Radium element was applied four times at intervals of ten days. The entire condition cleared up as if by magic, the odor and discharge disappeared, and the growth melted away. The surface of the cervix was smooth and had assumed its original contour, though somewhat enlarged; and the body of the uterus diminished in size and receded to its normal position in the pelvis. This patient was sent to the County Farm and was alive two years later. No return.

Mrs. L. D., West Indian negress, age 46. Referred by Dr. Thompson. When I saw her, April 7, 1917, she was septic and emaciated to the last degree, with a fixed growth in the abdomen extending up to the ensiform, laterally filling the entire abdomen. Vaginal examination showed all the pelvic tissues indurated and board-like, with a large rectovaginal fistula. She had a profuse vaginal discharge, mixed with blood, the odor from which was so unbearable that we could not have her in the ward with the other patients. Notwithstanding she was in a semi-conscious condition, Dr. Thompson was anxious to have radium tried, though I admit I was loath to acquiesce as I thought it must surely fail. However, I used it. At the end of six weeks there was an improvement which was unmistakable and which continued. On September 1st she came to the hospital for treatment, and actually walked from the conveyance to the elevator and from the elevator to the ward. The odor is practically gone, and the discharge has diminished. The growth now seems about four inches in diameter in the region of the right ovary. Her friends advised her to go to Boston in June, 1918, which she did. She died in August, 1919, I am advised.

Mrs. S., aged 60, came to me with a diagnosis of cancer. She had refused operation and desired to have radium treatment. On examination a very large cauliflower-like growth was found in the vault of the vagina. The cervix uteri could not be detected. This patient had been very stout, lost much weight, was very weak, in constant pain, and complained of a foul acrid discharge. After three applications, at intervals of three weeks, the vaginal growth, pain and discharge had disappeared. Morphia discontinued.

Mrs. X., age 56, pan-hysterectomy two and one-half years previously. Complete recovery; well for two years thereafter. For the last six

months, she has had a bloody discharge from the vagina. She kept this condition from the family, until the constant pain and foul odor compelled her to seek relief. A digital examination of the vagina proved impossible on account of the presence of a cauliflower growth. The pain was constant, loss of flesh pronounced, and she was very weak. Radium was used in the vagina. At the end of a week she returned for a second treatment. At this time the pain was gone, the odor much lessened and it was possible to examine the vagina. Two more treatments were given, at seven day intervals; when she returned after the fourth treatment all symptoms had disappeared and the vaginal growth was gone. Morphia discontinued. Patient died three months later.

Dr. R. came to me in July, 1918, with an epithelioma which had ulcerated through the left ala nasi, and had embarrassed his professional work for over two years. One application of radium was made. On August 10th he presented himself for observation; the ulcer had entirely healed, but with considerable scar as the necrosis had been extensive. January, 1920, still O. K.

H. S., age 10, came with a keloid growth following an operative incision four inches long in the instep. It was painful and progressive. One heavy application of radium was made over the entire length of the incision; the growth disappeared and the tissues softened.

Miss R. was referred to me December 8, 1917, by Dr. Branan of your city, with a papilloma at the urethral orifice. The patient was in constant pain and had been obliged to give up her position. Two applications of radium were had, and on March 1, 1918, she was back at work and normally comfortable. January, 1920, she wrote me she was all right.

Mrs. B., age 53, was referred by Dr. Van Arnum September 27, 1917, for the relief of uterine hemorrhage, which had been extensive and depleting for the past ten months. She had had her menopause eight years previously and had been well up to four months ago when the flooding began. She was asthmatic, with a chronic nephritis. Her physician thought her a poor surgical risk and so she came for radium treatment. We gave her three intrauterine treatments with radium and when I saw her on January 5, 1918, her trouble had all ceased. January, 1920, the doctor informs me that she is still O. K.

Mrs. B., aged 41, was operated on February 13, 1916, by an Albany surgeon for a carcinoma of the thyroid; diagnosis confirmed by the laboratory. She came to me in August, 1916, with a return of the growth, which was oval in shape, three centimetres in diameter and five centimetres in length. Radium was used over a period of five months. The growth had entirely disappeared and has not returned up to December 20, 1919.

Mr. C., age 67, occupation, merchant, a stout, flabby individual. Complains of having had bladder trouble, and slow difficult urination for the past five years, the condition gradually growing worse, until he had been obliged to resort to catheter life, and was forced to pass the catheter from seven to ten times in twenty-four hours. This condition had become so distressing that a narcotic was necessary. The prostate was a very large one, and demanded surgery. He was very feeble and not willing to accept the risk. This condition existed for a year and on one occasion while I was away, he had a severe protracted hemorrhage from the bladder. Dr. Comstock, who cared for him during my absence, believed the condition to be malignant and demanded surgery, saying he might die if it were done, but surely would if it were not. I used radium in the rectum. Strangely enough he gradually improved, gave up his morphine and his catheter life became no longer necessary, and he is at present attending to his daily business, January, 1920.

Wm. G., age 61, referred by Dr. Wilson, Johnstown, April, 1918, with an epithelioma which had destroyed the lower right eyelid, with the exception of the marginal border. The growth had extended well into the orbit, and there was a constant obnoxious discharge. He stated his condition had started about five years previously and had been progressive. Two applications of radium were made and on May 12th, he was entirely relieved. December, 1919, showed a good result.

H. L., male, age 70, a person of unusual sensitiveness. His chief distress was from the constant discharge from the anus of gas, fecal matter, pus, and blood, to the extent that he was obliged to wear a protective dressing and remain apart from his friends on account of the offensive odor. On examination, the entire circumference of the rectum, prostate and sphincters was found to be indurated and functionless. Radium was applied and in four weeks all induration about the sphincters and lower half of the rectum had disappeared. The return of the complete control of the sphincters brought cheer and comfort. He died about four months later.

A continuation of similar reports would add little of value, as the results must and do bear a direct result to the extent of the malignancy. The patients were all made more comfortable, some of them amazingly so. But a word of warning. My impression is that there is a growing tendency, on the part of radium workers, to try it out in primary conditions instead of surgery. This is experimental, and experimental remedies, in primary localized malignancy are not justifiable. This statement applies to fibroids as well, Kelly Burnham and Clark to the contrary, notwithstanding. The knowledge of the value of

radium in primary localized malignancies should only be acquired from its study in the cases which are inoperable, where the patient is a poor risk, or because they refuse operation absolutely.

How does radium affect or bring about changes in pathological tissues? I have no personal knowledge as I have had no opportunity of studying its effect in irradiated pathological specimens. I am impressed with the conclusions of the men, whose views follow.

Maloine of Paris writes: "The radium rays, acting on neoplasms, cause retardation of cell growth, a destruction of the cells, and in some malignant cells a change which leads to the cells becoming normal."

Schmitz of Chicago has proved by pathological specimens from a large number of cases, from his own clinic, that in cancer of the cervix uteri changes commence almost immediately after the radium has been applied; and that in a brief period the cancer cells have been generally destroyed. The changes consist in an immediate degeneration of the cancer cell, thereby causing a cessation of mitosis. This traumatic action is followed by a leukocytic and lymphocytic infiltration, resulting in connective tissue formation.

When the growth is situated so deeply that the rays have to pass through normal tissues in order to reach the pathological tissues, the action of the rays is not as effectual as if they were in the immediate contact with the diseased tissue. This fact was told me by Dr. Lee of Rochester when directing me how to use radium in my first case, 1915. Whenever possible, I place the radium in the wound at the time of operation and many times leave the wound open for this purpose. Dr. Beck of Chicago had a classic essay in the October number, 1919, of *Obstetrics and Gynecology* setting forth this fact, and proving the value of Dr. Lee's early knowledge. Perhaps this is the reason why radium is so effectual in superficial epithelioma, senile keratitis, tubercular glands and rodent ulcers.

The forms in which radium is employed are the insoluble salts of radium in glass containers, applicators in which radium is in varnish, and in needles. Latterly radium emanations have been

collected, placed in glass tubes and used instead of the radium salts.

The action of radium is modified or controlled by the manner in which it is screened. The screen usually consists of gold, silver, brass or lead, or some combination of these. Distance also modifies its effect. Normal tissue acts as a screen more effectually than is generally thought.

Physicists tell us that we are dealing with an element whose decay gives us a dynamic force second to none. They have deduced this from a study of its separate rays, each of which possesses qualities peculiar to itself. From the scientific determination of these individual rays, each possessing an intense selective and destructive action, we attempt to determine empirically the adaptation, the application, and the value of the various combinations of these several rays. Consequently, the problem complex is not easy to unfold, with its multiplicity of opportunity for error in manipulation, incident to the type of the diseased tissues, their distance from the radium application, as well as the variable combinations of metal screens, none of which are standardized: even the screens of the individual operators are often of different combinations of metals. Nor have we any means by which to determine the uniformity of rays after the screening has been arranged. Thus it comes down to the acuteness of the operator to duplicate conditions which previously proved satisfactory.

How dependable or uniform are the results of radium? That they vary somewhat under seemingly identical conditions has been my experience. It has also been my experience that my present results are decidedly more satisfactory than they were in my early work. I feel this is due to the fact that with increasing opportunities we grow more acute in judging the conditions of tissue we have to meet in each individual instance. Then we are more exact in arranging our screening. You realize, of course, that this information is only general, but at present we have only this general, personally acquired, information to guide us in individual instances.

In this attempt of an analysis of the possible reason why the effect of radium as a therapeutic agent is not constant, you may

think I am imaginative. You may not, however, if you follow these cases.

Miss A. received the emanation from one-fourth of a grain of radium for eight hours screened with one-half millimetre silver, one and one-half millimeters of brass, one and one-half millimeters of rubber and one-half inch of felt, which is conceded to be perfect and absolute screening for the elimination of both the B rays and secondary rays. Exactly sixty-three days after this application an inflammatory reaction occurred which was so sharp that a burn appeared which lasted for five weeks. You appreciate that it is an accepted fact that only the B rays and secondary rays are capable of producing the inflammatory conditions. The only possible explanation is that the rubber used was not pure and we had secondary rays set up causing the burn.

Mrs. B., age 40, housewife, June 16, 1919, stated she had had an enlarged spleen for years. Her appearance was that of a leukemic during an exacerbation. She was extremely emaciated, with a pale, drawn, expressionless face and looked seventy years old instead of forty. On examination she had an abdomen full of spleen.

Blood examination showed as follows:

June 17: red blood count, 2,864,000; white, 310,000; Hemoglobin, 40.

July 5: red blood count, 3,900,000; white, 25,000; Hemoglobin, 60.

July 28: red blood count, 4,112,000; white, 32,000; Hemoglobin, 68.

August 25: red blood count, 5,002,000; white, 24,000; Hemoglobin, 80.

She was given radium on each of the above dates over the entire region of the spleen.

Her appearance was again typical of relief in these cases. She was bright and cheerful, said she never felt better and had resumed all her family cares.

It may interest you to know that the spleen was so reduced that its outer edge was four inches to the left of the umbilical.

Physicists teach us, as you know, that radium emanations are not effective in malignant conditions beyond four centimetres and that past that point there is stimulation of the growth.

Miss S. Already reported. She had a descensus with a carcinoma four by six inches, the cervix everted appearing like a cauliflower. After three applications from one-fourth of a grain of radium the condition was normal, radium having been effective for twelve centimetres.

Then there is the case of Mrs. X., with a degenerative fibroid thirty-nine centimetres long. Treated by five applications with the emanations from one-fourth grain of radium for a total period of sixty hours and the growth reduced to the size of an adult fist. Action effective for thirty millimetres.

Another instance. Miss C., with sarcoma of the antrum; the same one-fourth grain of radium employed at twelve hour periods with marked success. After a corresponding interval of rest she was given a twenty hour application of the same intensity from which she developed a toxemia and died two days later.

With these indisputable instances is it too much to say, in explanation of the cause of the variable results observed in radium applications, that it is probably due to the inaccuracies of screening?

For some time I have been impressed that the local action of radium influences the general metabolism. This occurred to me as a probability when I noticed that every radium patient would take on a feeling of well-being and contentment; many would state that they had not felt so well for months. I then attempted a study of these cases with this thought in mind and we proceeded to determine the red cell count, the hemoglobin index, the urine, the elimination of the kidneys by the phenolphthalin test and the blood pressure, each time the patient returned for treatment. This, however, has proved of little value, in so far as we are able to give you acceptable conclusions from all the cases. The patients are seldom in the hospital for more than a few days at a time and they come for radium at irregular intervals and they are also given varying doses of emanation at varying times during the treatment, thus making a uniform comparison practically impossible.

I have however had a limited number of radium patients under constant observation and have tried to have the dosage of radium equal, and at the same interval, and from the results of the laboratory determinations in these instances I am convinced that when radium is applied locally it stimulated the general cell activity throughout the body, increasing the red blood count, the hemoglobin and the elimination and lowering of the blood pressure. Then take the case of leukemia in which I used radium locally over the entire area of the spleen. The results in this case proved conclusively that my thoughts were along the right line, if not technically conclusive. Dr. Ordway reported an identical case of leukemia at our county society with identical results. I hope to have some acceptable data for you on this point at another time.

My diagnoses in malignant conditions have all been clinical

and have not been corroborated by laboratory findings, as I believe biopsy is unwarrantable because of its pernicious possibilities. It has always been my observation that it stimulates the growth as a blacksmith's bellows acts on his fires and after it the growth is seldom controlled.

As a prophylactic, to irradiate around a surgical region in malignancy is theoretically correct, and I believe such procedure possesses clinical value.

With our present knowledge contraindications are practically nil. However, with a remedy that possesses such unusual dynamic force, one must have constantly in mind the possibility of serious toxemia. When a well advanced extensive malignant condition comes for treatment it is natural to want to do something or act decidedly; this is both unwise and unfortunate. We must go slowly with all these cases for if a patient has a low white count, or hemoglobin index and faulty elimination, he is an anxious subject for radium treatment. In my early work I had two fatalities from virulent toxemias, which developed from my anxiety to do too much in too short a time. I had also a third case which was as near death as they ever go and come back, in which the blood vessels of the throat ruptured from its use.

Reactions occur from the local application of radium in about twenty-five per cent. of the cases; these vary in degree from a slight nausea to nausea and vomiting with or without fever and at times with great prostration. The duration of reaction is from twelve to thirty-six hours. I have not been able to determine why some patients react and others do not. There seem to be no determinable indications as to when it is to occur, as the most violent reactions I have observed resulted in the local application of twenty-five milligrams of radium element in two cases, in one a single application for a period of twelve hours and in another for a period of twenty-four hours. Yet I read of 1,000 even 1,300 milligrams being used in large malignancies for twenty-four hours.

No case that has come to me has been refused radium, nor will be; for I have yet to see the patient that has not been made somewhat more comfortable by its use. I promise the prospective patient absolutely nothing in the way of betterment.

In closing my advice is: Never think of radium as a cancer cure; then you will never be disappointed when suggesting its use.

Editorial

And to stand in need of the medicinal art, said I, not on account of wounds, or some epidemical distempers incident, but through sloth and such a diet as we mentioned, filled with rheums and wind like lakes, obliging the skilful sons of Esculapius to invent new names to diseases, such as dropsies and catarrhs—do not you think this abominable?

THE REPUBLIC OF PLATO



**The Post-
Graduate
Course in
Public
Health.**

The Albany Medical College is again able to demonstrate its usefulness as an important agent for public service in the establishment of courses in special instruction for physicians in infectious diseases and sanitation. By affiliation with the State Department of Health, exhaustive practical demonstrations are given in sanitary science in the laboratories and clinics of the two institutions, which cannot fail to promote the welfare of the State. The plan has been developed in conformity with the following resolution adopted in 1915 by the Public Health Council of the State of New York, relating to the qualifications of local health officers:

I. They shall be graduates of medicine of not less than three years' standing;

II. They shall, when appointed, be not less than twenty-four nor more than sixty-five years of age;

III. They shall have complied with one of the following requirements:

(a) They shall have taken a correspondence course in public health of one year with at least one week of practical demonstrations in laboratory and field work, both correspondence course and demonstrations to be approved by the Public Health Council, with examinations and certificate; or

(b) They shall have taken a course in public health of at least six weeks including practical laboratory and field work with lectures and reading at an educational institution, such course to be approved by the Public Health Council, with examinations and certificate; or

(c) They shall have submitted evidence satisfactory to the Public Health Council of special training or practical experience in public health work, with examination if required by the Council; provided, however, that under special conditions specified in writing by the local board of health or other appointing power or by the health

officer any of these qualifications may be waived by the Public Health Council.

Increasing requirements for the efficiency of medical men reveal the jealous concern for physical well-being now controlling the community. The three learned professions no longer seem to be regarded with the same solicitude which in former times placed them upon equal planes of pre-eminence. The clergyman may still direct the conscience and the morals of his parishioners after acceptance of the rite of ordination, and the lawyer may protect the pocket and the person of his client after his intelligence has met the test of fitness for admission to the bar. But the physician, who was originally confirmed in his privileges by the collegiate degree of Doctor of Medicine, now finds that this ancient diploma is but evidence of the beginning of life-long consecration to the advances and intricacies of a highly differentiated and complicated calling. Before he may meet the adventitious demands upon his resources he must be able to display, or must cause to be prominently displayed in his office, the following entitled certifications of his mental equipment:

- I. A diploma granting the degree of Doctor of Medicine;
- II. A state license to practise medicine;
- III. A federal license to dispense narcotic drugs;
- IV. A state license for the same privilege;
- V. A federal liquor license;
- VI. An acknowledgment from the State Hospital Commission of his competency to certify to insanity;
- VII. A similar recognition from the State Commission on Feeble-Minded to determine the question of idiocy;
- VIII. A certificate of approval in Public Health from the State Department of Health.

The friends and alumni of the Albany Medical College may well take pride in its advanced methods of teaching which prepare students for the ordeals and examinations which lead to the possession of this formidable array of parchments.

The general arrangement of the courses now in progress is as follows:

Practically all of one day will be devoted to consideration of the most recent advances in diagnosis, management and treatment of pneumonia both from the laboratory and clinical standpoint;

A forenoon will be devoted to a practical demonstration and discussion of the physical diagnosis of incipient tuberculosis, with opportunity to examine cases and compare findings:

Special consideration will be given to the essential features of the theory of infection and immunity, to important diagnostic laboratory tests and to the prophylactic and therapeutic use of vaccins and sera.

Clinics will be given at the Albany Hospital presenting diseases of the heart, liver and kidneys, and also cases of other preventable diseases of adult life.

The purpose and possibilities of industrial medical departments will be discussed.

The tentative program subject to change is as follows:

THURSDAY, MARCH 4

- 9:30 A. M. Introduction to course. Dr. CHARLES C. DURYEE, Sanitary Supervisor.
- 10:00 A. M. Lecture and demonstration on general bacteriology and technique. Dr. AUGUSTUS B. WADSWORTH, Director of Laboratories.
- 12:30 P. M. Round table luncheon. Informal talk on the activities of health officers. (Place to be announced.) Dr. HERMANN M. BIGGS, Commissioner of Health.
- 2:00 P. M. Conference on the general diagnosis and management of tuberculosis. Dr. M. EDGAR ROSE, Director of Child Hygiene.

THURSDAY, MARCH 11

- 10:00 A. M. Laboratory work. Practice in making, staining and examining smears, etc.
- 1:30 P. M. Diagnoses of the exanthemata. Dr. MATTHIAS NICOLL, JR., Deputy Commissioner of Health.
- 2:30 P. M. Visit to Albany Hospital, Pavilion G. Contagious Department.
- Conference on common skin diseases. Under direction of Dr. ARTHUR SAUTTER, Health Officer of Albany.

THURSDAY, MARCH 18

- 10:00 A. M. Laboratory. Pneumococcus differentiation (including animal demonstration). Demonstration of prophylactic and therapeutic measures in pneumonia.
- 2:00 P. M. Diagnosis and treatment of pneumonia with clinical demonstration. Dr. THOMAS ORDWAY, Dean of the Albany Medical College.

THURSDAY, MARCH 18

- 10:00 A. M. Laboratory. Laboratory diagnosis of typhoid and paratyphoid; detection of carriers in typhoid, and paratyphoid, dysentery, etc.
- 1:30 P. M. Carriers of communicable diseases. Dr. F. M. MEADER, Director, Communicable Diseases.
- 2:30 P. M. Epidemiology of typhoid and paratyphoid. Dr. PAUL B. BROOKS, Assistant Director of Laboratories.

THURSDAY, APRIL 1

- 10:00 A. M. Laboratory. Diphtheria, Vincent's Angina and allied throat infections. Virulence test for diphtheria.
- 1:30 P. M. Municipal control of diphtheria, including dosage and methods of administration of antitoxin. Dr. WILLIAM H. PARK, New York University.
- 3:30 P. M. Demonstration of Schick test, and active immunization. Dr. WILLIAM E. YOULAND, Division of Laboratories.

THURSDAY, APRIL 8

- 10:00 A. M. Laboratory. Demonstration of preparation of vaccines.
- 1:30 P. M. Lecture, demonstration and conference on infection, immunity and anaphylaxis. Dr. WADSWORTH.

THURSDAY, APRIL 15

- 10:00 A. M. Laboratory. Demonstration of influenza bacillus, streptococcus staphylococcus and other bacteria of the upper respiratory tract.
- 1:30 P. M. Smallpox and vaccination. Dr. FREDERIC C. CURTIS, Consulting Dermatologist, State Department of Health.
- 2:30 P. M. Smallpox and the sanitary code. Dr. DURYEE.

THURSDAY, APRIL 22

- 10:00 A. M. Graphic presentation of health facts. Dr. MEADER.
- 2:00 P. M. Clinic on serum and vaccinothrapy. At Albany Hospital. Drs. ORDWAY and L. W. GORHAM, Albany Medical College.
- 3:00 P. M. Clinical conference. Dr. ORDWAY.

THURSDAY, APRIL 29

- 10:00 A. M. Lecture and demonstration of sanitary examination of milk and water. Mr. L. M. WACHTER, Chemist.
- 1:00 P. M. Relation of milk to public health. Dr. J. S. WALTON, Sanitary Supervisor.
- 3:00 P. M. Pasteurizing plants. Under direction of Mr. THEODORE HORTON, Director of Sanitary Engineering.

FRIDAY, APRIL 30

- 10:00 A. M. Conference (with practical demonstration, examination of cases and exhibition of x-ray plates) on early diagnosis of tuberculosis. Dr. ROSE, Dr. M. F. LENT, Supervisor of Tuberculosis, and Dr. P. J. HIRST, Superintendent, Saratoga County Tuberculosis Hospital.

THURSDAY, MAY 6

- 10:00 A. M. Laboratory. Demonstration of *Treponema palladum*, gonococcus, and the preparation of arsphenamine.
- 1:30 P. M. Conference on control of venereal diseases, including discussion of venereal disease laws and regulations. Dr. JOSEPH S. LAWRENCE, Chief, Bureau of Venereal Diseases.
- 2:30 P. M. Treatment of venereal diseases. Dr. EDWARD H. MARSH, Consultant in Venereal Diseases.

FRIDAY, MAY 7 (FORENOON ONLY)

- 10:00 A. M. Conference on water supply and water purification. (Visit to filtration plant.) Under direction of Mr. HORTON.

THURSDAY, MAY 13

At Schenectady

- 10:00 A. M. Conference on health administration. Visit to city health department and health center. Under direction of Dr. DURYEE.
- 1:30 P. M. Conference on infant hygiene and prenatal care (at Child Welfare Station). Dr. ROSE.
- 2:30 P. M. Conference on bedside and terminal disinfection. Dr. DURYEE.

FRIDAY, MAY 14 (FORENOON ONLY)

- 10:00 A. M. Conference and practical demonstration dairy inspection and scoring. Under direction of Dr. J. H. MILLER, Milk Inspector, Albany.

THURSDAY, MAY 20

- 10:00 A. M. Demonstration. Lumbar puncture and spinal therapy. Dr. GORHAM.
- 1:30 P. M. Duties of health officers in connection with the insane. Mr. EVERETT S. ELWOOD, Secretary, State Hospital Commission.
- 2:30 P. M. Conference on general laws relating to duties and powers of health officers and health boards. Mr. JOSEPH A. WARREN, Legal Adviser.

FRIDAY, MAY 21 (FORENOON ONLY)

- 10:00 A. M. Conference on medical school inspection. Dr. WILLIAM A. Howe, State Medical Inspector of Schools.
- 11:15 A. M. Conference on public hygiene. Dr. J. E. CLARK, Sanitary Supervisor.
- 12:15 P. M. Poliomyelitis and its after-care. Dr. LE ROY HUBBARD, Orthopedic Surgeon.

THURSDAY, MAY 27

- 10:00 A. M. Conference on control of communicable diseases in schools. Dr. JOHN A. SMITH, Secretary, State Department of Health.
- 11:00 A. M. Conference on vital statistics. Dr. OTTO R. EICHEL, Director of Vital Statistics.
- 1:30 P. M. Isolation hospitals. Dr. J. G. WILSON, U. S. Public Health Service.
- 2:30 P. M. Public health administration. Dr. DURYEE.

FRIDAY, MAY 28 (FORENOON ONLY)

- 10:00 A. M. Demonstration of disinfection and sterilization. Mr. WACHTER.

THURSDAY, JUNE 3

- 10:00 A. M. Conference on disposal of sewage. Mr. HORTON.
- 11:00 A. M. Conference on rural sanitation. Mr. HORTON.

FRIDAY, JUNE 4 (FORENOON ONLY)

- 10:00 A. M. Clinical examination and diagnosis of blood. Urinary examination. Dr. L. W. GORHAM.

THURSDAY, JUNE 10

- 10:00 A. M. The health officer and the public health nurse. Dr. SMITH.
- 11:00 A. M. Preventable diseases of adult life. Dr. ORDWAY.
- 1:30 P. M. Review and general discussion including health law, sanitary code, health administration, communicable diseases and epidemiology. Dr. DURYEE and Dr. BROOKS.

FRIDAY, JUNE 11 (FORENOON ONLY)

- 10:00 A. M. Industrial medical departments. Dr. EDWARD S. GODFREY, Jr., Epidemiologist.
- 11:15 A. M. Infant feeding. Dr. H. L. K. SHAW, Consultant on Child Hygiene.

THURSDAY, JUNE 17

- 10:00 A. M. Clinics by Drs. HERMON C. GORDINIER, ARTHUR W. ELTING, THOMAS ORDWAY and CLINTON B. HAWN.

FRIDAY, JUNE 18

Final examination, written and oral.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

DEATHS FOR MONTH OF JANUARY, 1920.

Consumption	15	Bright's Disease	14
Typhoid Fever	0	Apoplexy	8
Scarlet Fever	0	Cancer	14
Whooping Cough	0	Accidents and Violence.....	8
Measles	0	Deaths under 1 year.....	17
Diarrheal Diseases	1	Deaths over 70 years.....	45
Pneumonia	8	Death rate	17.60
Broncho Pneumonia	8	Death rate, less non-residents	15.73

Deaths in Institutions

	Non- Res.	Res.		Non- Res.	Res.
Albany Hospital	10	6	Old Ladies' Home.....	0	1
Albany Hospital T. S....	2	3	St. Margaret's House...	2	0
Albany County Hospital	0	1	St. Peter's Hospital.....	4	11
Homeopathic Hospital ..	2	9		—	—
Hospital for Incurables.	2	1		22	39
Home for the Aged.....	0	3	Births		200
Maternity Hospital	0	4	Still Births		4

DIVISION OF COMMUNICABLE DISEASES.

Typhoid Fever	1	Mumps	53
Scarlet Fever	49	Pneumonia	70
Diphtheria and Croup.....	24	Influenza	429
Chickenpox	57	Septic Sore Throat.....	6
Smallpox	0	Trachoma	1
Measles	6	Ophthalmia Necnatorum ...	1
German Measles	1		—
Whooping-cough	44	Total	763
Tuberculosis	21		

Number of days quarantine for scarlet fever:

Longest..... 47 Shortest..... 30 Average..... 31 17/20

Number of days quarantine for diphtheria:

Longest..... 43 Shortest..... 13 Average..... 25 9/10

Fumigations:

Rooms..... 348 Buildings..... 40

Milk bottles disinfected..... 380

Communicable Diseases in Relation to School

	Reported D. S. F. M.
Public School No. 3.....	5
Public School No. 4.....	4
Public School No. 6.....	2
Public School No. 8.....	8
Public School No. 10.....	2
Public School No. 12.....	6
Public School No. 14.....	2
Public School No. 15.....	3
Public School No. 17.....	1
Public School No. 18.....	2
Public School No. 21.....	2
Public School No. 24.....	1 1
Oral School	1
St. John's School	1

MISCELLANEOUS.

Cards posted for communi- cable disease	79	Vaccination dressings	24
Cards removed	34	Children examined for em- ployment certificates	24
Notices served on schools...	241	Number of employment cer- tificates issued	25
Notices served on stores and factories	9	Taking specimens of blood for Wassermanns	2
Postal card returns sent to doctors	79	Taking smears for Gonococci	0
Postal card returns received from doctors	34	Miscellaneous investigations by Seventh District Phy- sician	33
Inspections and reinspections	87		
Vaccinations	8		

Tuberculosis.

Living cases on record January 1, 1920.....	908
Cases reported:	
By card	15
Dead cases by certificate.....	6

029

(Three tuberculosis non-resident deaths not reported.)

Dead cases previously reported.....	9
Dead cases not previously reported.....	6
Removed	44
Died out of town.....	0
Recovered	0
Unaccounted for	0
	59

Living cases on record February 1, 1920.....	870
Total tuberculosis death certificates.....	15

Non-resident deaths:

Albany Hospital Camp.....	2	
C. F. L. Pavilion.....	0	
County Hospital	0	
St. Margaret's House.....	0	
City at large.....	0	2

Resident deaths	13	
Visits to cases of tuberculosis.....	0	
Miscellaneous visits	31	
Visits to physicians.....	2	

LABORATORY REPORT.

Diphtheria.

Initial Positive	35	Unsatisfactory	17
Initial Negative	322		
Release Positive	151	Total	829
Release Negative	304		

Sputum for Tuberculosis.

Positive	66	Unsatisfactory	0
Negative	158		
		Total	224

Widals.

Positive	1	Unsatisfactory	0
Negative	12		
		Total	13

Meningococcus.

Positive	0	Negative	0
		Total	0

Wassermann tests	309	Gonorrhoea Examinations ..	68
Milk Analyses	53	Miscellaneous Examinations.	17
Water Analyses	0		
Pathological Examinations ..	0	Total Examinations	1,513

HEALTH PHYSICIAN'S REPORT.

Cases assigned	62	Calls made	107
----------------------	----	------------------	-----

DIVISION OF SANITATION.

Complaints	32	Garbage collected from 1st	
Inspections	28	District	104
Plumbing	11	Garbage collected from 2nd	
Sanitary	17	District	138
Reinspections	34	Garbage collected from 3rd	
Plumbing	16	District	195
Sanitary	18		

HEARINGS.

Hearings	0	Cases heard	0
----------------	---	-------------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	145	Houses tested	15
Old Houses	62	Smoke	0
New Houses	83	Blue or red.....	0
Permits issued	31	Peppermint	2
Plumbing	30	Water test	13
Building	1	Houses examined	12
Plans submitted	4	Re-examined	65
Old Buildings	3	Valid	9
New Buildings	1	Without cause	3
		Violations	0

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	11	Cats removed	105
Dogs removed	107		
		Total	223

DIVISION OF MARKETS AND MILK.

Public market inspections...	22	Milk cans condemned.....	0
Market inspections	142	Lactometer readings	33
Fish market inspections....	12	Temperature readings	33
Fish peddler inspections....	0	Fat tests	36
Slaughter house inspections.	3	Sediment tests	0
Rendering establishment in-		Chemical tests	0
spections	0	Cows examined	53
Pork packing house inspec-		Cows quarantined	2
tions	4	Cows removed	0
Hide house inspections.....	0	Complaints investigated	0
Milk depots inspected.....	14	Milk houses inspected.....	2
Stores inspected	0	Dairies quarantined for com-	
Dairies inspected	2	municable disease	2
Milk cans inspected	325		

Society Proceedings

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.—Minutes of the regular monthly meeting of the Medical Society of the County of Albany, held Tuesday evening, January 13th, 1920, in the auditorium of the City Hall, corner of Maiden Lane and Eagle street.

The meeting was called to order by the President, Dr. J. N. VANDER VEER. The minutes of the annual meeting held December 12th, 1919, were read and approved.

Dr. N. K. FROMM reported for the Luncheon Committee. Dr. B. K. DE VOE reported for the Auditing Committee which examined the books of the retiring treasurer, Dr. J. A. Cox, whose accounts for the past year were audited and found correct.

A motion was made, seconded and carried that the Auditing Committee appointed be discharged since its duty had been performed.

The names of Drs. L. B. SEAPORT, J. J. PHELAN, and J. L. HEMSTEAD were balloted upon and said physicians elected to membership.

The meter-liter-gram system as advocated by the World Trade Club, in the form of a circular letter was read.

A letter from the State Society urging that the attention of members be called to the editorial found in the December issue of the *New York State Journal*, regarding the scientific program and attractive features to be presented at the next annual meeting was read.

The matter of electing a counsel to act for the Medical Society of the County of Albany was referred to the Comitia Minora.

Dr. DOUGLAS C. MORIARTA of Saratoga Springs read a paper entitled "Radium. Its Use. Pro and Contra."

An exhibit of screens, radium in tubes and other apparatus for carrying out treatment was presented.

Drs. Mount, Traver, E. VanderVeer, Kellert, Fromm, Dowling, Bedell, J. L. Bendell and J. N. Vander Veer discussed the paper.

Those present were Drs. Aronowitz, Ball, Bedell, J. L. Bendell, Colbert, Curtis, De Voe, Dickinson, Dowling, Fromm, A. W. Green, Harrig, Heslin, Hinman, Judge, Jenkins, Keens, Keough, Kellert, Leonard, Lyons, J. J. A. Lyons, J. S. McCormick, McHarg, Mann, Moore, Mount, Mullens, Mereness, O'Leary, Papen, Sr., Papen, Jr., Randall, Rooney, Stapleton, Stein, Stott, Tebbutt, Todd, Traver, E. A. Vander Veer, J. N. Vander Veer, and Drs. D. C. Moriarta and W. Moriarta, by invitation.

A luncheon was served at the Adelphi Club after the meeting.

PERCIVAL C. HARRIG, M. D., *Secretary*.

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—STATISTICS FOR JANUARY, 1920.—Number of new cases this month, 400; classified economically: Free, 248; bed cases, 60; instr. and soc. service, 6; prenatal, 35; dispensary social service, 44; positive tuberculosis, 18; dispensary tuberculosis, 6; hospital social service, 73; venereal, 6. Paid, limited means, 52; metropolitan, 100. Cases carried over from last month, 1,044; nursing cases, 80; prenatal cases, 46; dispensary social service, 10; tuberculosis positive, 388; tuberculosis supervision, 280; hospital social service, 160; venereal, 80; total number of cases carried during the month, 1,444. Division of nursing cases: Medical, 114; surgical, 41; obstetrical, 62; prenatal, 35; babies, 31; maternity, 5; confinements, 30; undiagnosed, 3; no illness, 2.

Visits for Nurses (all departments): 1,771; for nursing care, 1,044; prenatal instruction, 82; for tuberculosis supervision and instruction, 135; for venereal supervision and instruction, 107; for hospital social service, 150; for general social service including dispensary, 132; for supervision, 48; for other purposes, 73.

Source of Nursing Cases.—Metropolitan agents, 95; doctors, 40; nurses, 19; other sources, 14; dispensary, 6; family or friends, 79.

Disposition of Nursing Cases.—Discharged recovered, 26; improved, 114; unimproved, 41; dead, 9; to other care, 8; to hospital, 6; carried, 143. Disposition of other cases: Prenatal: To maternity care, 16; carried, 65; dispensary social service: To dispensary care, 35; carried, 19. Hospital social service: O. K. to go home, 30; discharged dead, 5; to dispensary, 14; to private physician, 0; police cases, 0; to tuberculosis department, 0; to nursing care, 1; left town, 0; carried, 183. Venereal: Discharged, 2; carried, 84. Tuberculosis: Discharged dead, 6; carried positive, 400; carried under supervision, 114; carried under dispensary care, 113; total carried, 627. Number of cases carried over into February: Nursing cases, 143; prenatal cases, 65; dispensary social service, 19; tuberculosis positive, 400; tuberculosis supervision including dispensary, 227; hospital social service, 183; venereal, 84; total carried, 1,121.

Dispensary Report.—Number new patients, 159; number of clinics held, 78; number old patients, 553; total number of patients, 712. Classification of clinics: Surgical, 9; nerve, 3; skin, 4; medical, 7; children, 12; eye and ear, 17; venereal, 9; gynecological, 5; prenatal, 1; lung, 0; nose and throat, 8; children's lung, 3.

THE ASSOCIATION FOR THE STUDY OF INTERNAL SECRETIONS.—The object of this association is to correlate the work and interests of many physicians and students throughout the world, who are engaged in the study of the internal secretions and organotherapy, and by concerted effort to broaden knowledge in this field.

An important part of the associations' activities is the publication of a

journal, *Endocrinology*. By means of original articles, authoritative reviews, special articles and abstracts, the progress of endocrine science is fully and promptly reported. Hundreds of journals in a dozen languages are "covered." The aim is to make the abstract department exhaustive and thoroughly reliable. A cross-index of the subjects and authors in each issue renders it easy to assemble the literature on any point.

The association is not limited to specialists. While the membership already includes numbers of physiologists, pathologists and other investigators, it includes a still larger number of physicians in active practice.

Every branch of medicine is interested in endocrinology. The orthopedist recognizes the importance of the internal secretions in relation to the physiology and pathology of bone development. The ophthalmologist realizes the relation of the pituitary and the thyroid glands to his field; the pediatrician is especially interested because growth and development are controlled by hormones, and many disorders of childhood are due to, or aggravated by, disturbances of the endocrine glands. Many disorders seen by the neurologist, psychiatrist and gynecologist are brought about by endocrine defects and there is a large and increasing literature dwelling upon the diagnostic and therapeutic phases of this subject. In internal medicine and surgery the endocrine glands figure constantly.

Scientific sessions are held annually at the same time and place as those of the American Medical Association. Reputable physicians and investigators are eligible for membership. The annual dues are \$5.00, payable in advance, which includes a subscription to *Endocrinology*, the association's bulletin.

Address the secretary: F. M. Pottenger, M. D., 1103 Title Insurance building, Los Angeles, California.

NEW YORK DIAGNOSTIC CLINICS.—The use of this institution by out-of-town physicians for the study and diagnosis of their difficult, unusual or complicated cases has led the board of governors to release a larger number of ward, semi-private and private beds to accommodate their patients. There are unusually complete facilities for caring for patients whose cases require one or more days study and at the completion of the examination both patient and reports of the diagnosis are returned to the referring physician.

The registrar will be pleased to furnish any further information that may be desired. Dr. M. Joseph Mandelbaum, medical director, 125 West 72nd street, New York City.

MEDICAL SOCIETY OF THE COUNTY OF RENSSELAER.—The regular monthly meeting was held at the court house, Tuesday evening, February 10, at 8.30 o'clock. The following program was presented: Demonstration of Wassermann Reaction and its interpretation, Dr. H. W. Carey; Demonstration of Colloidal Gold Reaction and its interpretation, Dr. I. Walsh;

Some apparent results from a new chemical, the formula of which is K_2CuCn_3 , Dr. B. S. Booth.

THE SOCIETY OF ALLIED MEDICAL PROFESSIONS.—A meeting of the Society of Allied Medical Professions was held February 3, 1920, at the Albany County Court House. The following program was presented: The Need of Consultation, both Medical and Dental, in Taking Radiographs of the Jaws, for Determining Causes of Systemic Disturbances, by Morton Van Loan, D. D. S.; Discussion of the Proposed Changes and Amendments in the Bill Concerning the Licensing and Registration of Nurses, discussion opened by Marion F. Brockway, New York; motion picture exhibit, by Gilbert M. Tucker, Jr., Supervisor of Exhibits of the New York State Department of Health.

ANTI-VACCINATIONIST IN POLAND.—American Red Cross doctors in charge of the fight against cholera in Poland, when that disease made its appearance in Kowel last January, had a great deal of difficulty in persuading the people to submit to vaccination. Their reluctance amounted at first almost to actual rebellion, and many of them frankly preferred death.

The secret of this popular antagonism dates back a few years to a time under the Russian régime, when a similar cholera scare alarmed the community. At that time the Russian authorities, determining on vaccination, declared martial law and began forcibly to vaccinate the people. These harsh methods not only aroused popular anger, but were in many cases followed by tragic consequences due to improper sterilization. Many cases of serious infection, loss of limbs, and even of life, resulted. In the end the people rose and threw the Russian military doctor into the town well.

The Americans used different means. They started a local educational campaign, using printed posters, and got all the civil and military employees to volunteer to be inoculated. Plenty of vaccine had been brought from Red Cross headquarters at Bialystok, and very soon the popular mind was opened to the dangers of the epidemic and the townspeople began coming in, by twos and threes, and then in crowds.

As a result, the threatened epidemic lasted only three days, and only fifteen lives were lost.

SOUTHERN CHIVALRY IN MONTENEGRO.—In rehabilitating the American Red Cross hospital in Cetinje, Montenegro, which was left by the Austrian armies in an unspeakable filthy and dilapidated state, male labor was used—perhaps the first time in the history of the little mountain kingdom that such a thing has happened. On the arrival of the Red Cross, a request was sent to the prefect for thirty-eight men to help in the work of cleaning up. The women have always done such work before, and so naturally the prefect sent thirty-eight women. But this did not agree with the plans of Captain William Watts, who was in charge of the work.

"This hospital is going to be built on the American plan," said Captain Watts firmly. Captain Watts is from Georgia, and the idea of employing women to work was abhorrent to him.

Neither the prefect nor the women, however, seemed quite to grasp his point of view. "What is the matter?" one of the women demanded. "Don't we look strong enough?" And the old prefect looked on with a puzzled expression. For centuries the women have done this sort of work in Montenegro, and he shook his head as much as to say: "These American ideas! Sentimental piffle!"

But Captain Watts won his point in the end; Southern chivalry compromised with Balkan custom; and a gang of men went to work on the drains, while the women looked on with smiles, and an air of superiority, as who should say: "H'm! They'll never be able to stand it. Who ever heard of men doing heavy work like that!"

But before many days the work was finished, and the hospital was running at capacity. The old social order had been reversed without a male suffrage campaign. And the hundreds of sick in Cetinje were being efficiently cared for in the renovated wards.

MATERNAL WELFARE WORK IN FRANCE TO CONTINUE.—The Maternal Welfare Work established in France, under the auspices of the Red Cross Children's Bureau, by Dr. F. L. Adair, Associate Professor of Obstetrics and Gynecology in the University of Minnesota, Minneapolis, is to continue. The plan of prenatal consultation established by Dr. Adair is to serve as a model in the School of Peuriculture of Child Welfare, which is to function under the American Red Cross Children's Bureau cooperating with the Medical College of Paris.

In September, 1918, Dr. Lucas, Director of the Children's Bureau, began an investigation of prenatal care in Paris. He requested that the work be organized systematically under a definite head and Dr. Adair was given the commission.

In the few months, during which the work was established in two sections in Paris, the population of which numbers 600,000 about 500 prospective mothers were cared for in the consultations and also in their homes, which means that this number of families were approached in both a medical and social way.

In the hospital Social Service work, which was conducted for only two months, the results were most gratifying and much was accomplished. Over 500 prospective mothers were interviewed and advised how best to meet their new problems of living. The response from the people was pathetic, showing how great had been their need of guidance.

The women were found by securing from the Mairie the list of those who had applied for an "allocation;" by establishing a liason with the maternity hospitals of the neighborhood to secure names of women registered in their consultations who lived in the quarters where prenatal work was being conducted; by establishing friendly relations with the "sages

femmes" of the neighborhood and by helping them to give their patients better care; by references from such other agencies as the Rockefeller Commission and Children's Welfare work and by one woman bringing another to the consultation. Through these agencies about 800 women came to the prenatal consultations during the first six months.

An organization was formed to carry on the medico-social work installed in the hospital and an attempt was made to form a society of social visitors who would be capable of teaching the mothers the proper methods of caring for themselves, of making preparations for the birth of the child and giving other information necessary for persons in their condition.

ACTION DIURÉTIQUE DU RIZ.—E. Doumer (Lille) (réunion biologique de Lille, 10 mai, 1919). Au cours de l'enquête, qu'il a faite pendant l'occupation de Lille par les Allemands sur les causes de l'amaigrissement rapide et profond des populations des régions envahies (enquête dont il commence aujourd'hui la publication) Monsieur Doumer a constaté que l'ingestion de riz s'accompagnait souvent d'une diurèse, extrêmement abondante. Ses expériences (qu'il relate) mettent nettement cette action en évidence. Dans cette première note l'auteur se contente de montrer et d'établir ce fait. Mais cette action diurétique est-elle réelle ou apparente? directe ou indirecte? M. Doumer réserve sa réponse pour le jour où il aura exposé le processus de cet amaigrissement et où il en aura donné l'explication.

PERSONAL.—Dr. JOHN A. BATTIN (A. M. C., '08), who served as major in the United States army in France and who was severely wounded at Hangard Woods April 26, 1918, has opened an office for the general practice of medicine at 1007 State street, Schenectady.

Dr. Battin, who is also a veteran of the Spanish-American war, volunteered his services on May 31, 1917, and enlisted in Albany as captain. On September 10, 1918, he was promoted to the rank of major because of his faithful services and the ability he displayed.

In August, 1917, he sailed from this country for Albert, France, and served at the front for more than a year. Among the many places at which he was stationed and which were under fire were Arras, Ypres, Winereux, Amiens, Villiers, Brettneux and Hangard Woods, where he was wounded by shrapnel in his head, shoulder, left and right hands and body. He was in an army hospital for four months, when he was invalided home. He received his discharge from the United States army at Hoboken, N. J., December 31, 1918.

Dr. Battin received his preliminary education at the Troy Conference academy, from which he was graduated in 1899, and at Albany Medical College. He received his degree from the latter in 1908. Up to the time he volunteered his services to his country, he practiced his profession in Newport.

In Memoriam

COLONEL JOHN VAN RENSSELAER HOFF, M. D., U. S. A.

COLONEL JOHN VAN RENSSELAER HOFF, U. S. A., retired, "an officer of long and distinguished service and one of the best known in the whole army," died at Takoma Park, D. C., January 14, 1920.

Colonel Hoff was born at Mount Morris, N. Y., April 11, 1848, the son of Alexander H. and Ann Eliza (Van Rensselaer) Hoff. The following collegiate degrees were conferred upon him: A. B., Union College, 1871; A. M., Union College, 1874; M. D., Albany Medical College, 1871, Columbia University, 1874; LL. D., Bucknell University, 1906, and Union University, 1912.

After his graduation in medicine he entered the Regular Army as assistant surgeon in the Medical Department November 10, 1874, having served previously for a short time as an acting assistant surgeon at Fort Omaha. During the years from 1874 until 1879 his service was on the western frontier. In 1879 he was relieved from duty in the Department of the Platte and ordered to New York City, where he was promoted to the grade of captain, and served at Fort Monroe. In 1882 he was assigned as post surgeon at Alcatraz Island, where he served until 1884, and next served at Fort Mason, Calif., and at other posts in Kansas and Indian Territory. During this period he spent considerable time with troops in the field. In November, 1890, he took the field with eight troops of the 7th Cavalry and Light Battery E of the 1st Artillery against hostile Sioux, and was on duty with them from that time up to and through the fight with the Big Foot band on Wounded Knee Creek on December 29 and 30, and at White Clay Creek on December 30 of the same year.

During this Indian outbreak he conducted himself with marked gallantry in the performance of his duties as surgeon, and G. O. 100, December 17, 1891, H. Q. A., commended him and others who had shown gallantry during that year. On return to Fort Riley, he was ordered to proceed to camp near Florence, Kas., to care for those of the 2d Battalion, 7th Cav., Light Battery E, 1st Artillery and Light Battery F, 4th Artillery, injured in a railroad accident at that point. On June 15, 1890, he was promoted to major. Among many other duties he served at Fort Columbus, N. Y., and was appointed a representative of the Medical Department to accompany the foreign delegates of the Pan-American Medical Congress to Boston, Saratoga, Niagara, Detroit, Cincinnati and Chicago. He was member of a board to meet at David's Island, N. Y., in 1896, for revising drill regulations for the Hospital Corps. He next served at Vancouver Barracks, Wash., and in 1898 he was commissioned as lieutenant colonel of Volunteers, and assigned as chief surgeon, 3d Army Corps, at Chickamauga Park. On October 19, 1899, he sailed for San Juan, P. R., as chief surgeon.

In July, 1900, Colonel Hoff was ordered to Peking, China, to report to Major General Adna R. Chaffee as chief surgeon on his staff during the Boxer rebellion. He later served as chief surgeon of the Department of the Lakes, and then in the office of the Surgeon-General in Washington. In 1902 he was promoted lieutenant colonel, and appointed member of the board to consider modification of uniform equipment. After serving at Fort Leavenworth, he was an observer with the Russians in the Russo-Japanese War. Subsequent service included duty as chief surgeon of Luzon, 1906-1908; chief surgeon, Department of the Lakes, in 1909; chief surgeon, Department of the East, where he served until retirement for age April 11, 1919.

Colonel Hoff was instructor in ophthalmology in the University of California in 1895 and professor in the Army Medical School in 1901-2; instructor in military hygiene at the General Service and Staff College in 1903-5, and professor of military sanitation at the University of Nebraska in 1906. He was president of the Association of Military Surgeons of the United States in 1901-2, and had membership in the New York Academy of Medicine in the Military Order of the Loyal Legion, the Society of the Dragon, the Sons of the Revolution and the Society of Colonial Wars, and was the recipient of the Order of Saint Anne of Russia. He contributed frequently to medical literature, and among the more important of his articles were the following: "The Most Practicable Organization for the Medical Department of the United States Army in Actual Service;" "Outline of the Military-Sanitary Organization of Some of the Great Armies of the World;" "Military-Sanitary Organizations on the Lines of Communication and at the Base;" "Some Suggestions for the Organization and Interior Economy of a State Medical Military Sub-Depot in War Time."

The following tributes to the character and esteem in which Colonel Hoff was held by his colleagues in the United States service was published in the *Army and Navy Journal*:

"His passing will be a cause of sorrow to very many, not only in the Army of which he formed so distinguished a member," writes an officer, "but to many in other services and to the countless friends whom he made in his life amongst those whose duties lay in civilian life. He was a man of much natural charm, of pleasant address, and, withal, of a dignity which well became his erect bearing and soldierly appearance. He gave his best to the service of his choice, and it was due to the direction of the efforts of his able mind that the many changes, and always changes for the better, were made in respect to the organization of the Medical Corps which he saw grow up and develop from its more simple predecessor, the Medical Department. There are many in the Army Medical Corps now who remember him with affection on account of his personal traits, and who also remember him with gratitude because through his wise counsel and sober advice they profited much in the learning of the profession of military medicine."

"Assuredly a wave of sorrow and regret throughout the Army will follow the death on January 14 of Colonel John VanR. Hoff., U. S. A., retired. His services in the Medical Department were most distinguished. At a time when it was necessary, he was the leader, reformer and advocate of proper military training and preparedness in his corps. The results of his work in these matters were marked in the Spanish-American War, and led largely to the movement which culminated in the wonderful expansion and sufficiency of our Medical Department in the World War. His retirement as colonel afforded another shining example of those great men who fail to receive the high honors which, by common consent, are their just due. As a physician he was most able, attentive and sympathetic, and his buoyancy and confidence were so helpful that his patients longed for his visits. His energy was without limits; he never spared himself, and no duty, however small, but received the most thorough attention. This most efficient officer was also the cultured and refined gentleman; the devoted son, brother and husband; the loyal and helping friend—a true "*Chevalier Bayard, sans peur et sans reproche.*" Few who knew or lived or served with this man but were the better for it, and the force of his influence for good will pass on down through many generations. With us, who knew him intimately, and loved him, he holds his place in those brief lists wherein can be counted on the fingers of the hands those best and noblest men who have had part in our lives."

JAMES H. GALLUP, M. D.

Dr. JAMES H. GALLUP, who graduated from the Albany Medical College with the Class of 1871, died at his home in Delmar, N. Y., on February 2, 1920, aged eighty-six years.

Immediately after graduation Dr. Gallup began practice at Gravesend, N. Y., where his services were in demand, and where he had considerable experience in the treatment of smallpox and yellow fever. Dr. Gallup was a veteran of the Civil War, and was somewhat advanced in years when he began the study of medicine. After practicing at Gravesend for ten years his health failed as a result of his army experience, and he removed to Delmar, N. Y. He there limited his practice, but has been able to attend to some patients creditably, although twenty years before his death he felt that his strength might not long continue.

GEORGE VICTOR GENZMER, M. D.

Dr. GEORGE V. GENZMER died on January 30, 1920, at his home in Verona, N. J., aged twenty-nine years. The cause of death was broncho-pneumonia, with which Dr. Genzmer and his wife had both been stricken at the same time.

Dr. Genzmer received his preliminary education at the high school in Pittsfield, Mass., and graduated from the Albany Medical College with the class of 1913. After graduation Dr. Genzmer was assistant in pathology at the Bender Hygienic Laboratory, and also had interne service in the Albany Hospital. Afterward he was engaged in the laboratory of the Kings County Hospital at Brooklyn, N. Y., and later became pathologist of the Muhlenberg Hospital at Plainfield, N. J. He served during the war as Passed Assistant Surgeon, with rank of Lieutenant in the U. S. N. R. F. with Naval Station Unit No. 3. He was released from active service September 1, 1919, and settled in Verona, N. J., where he was establishing himself in general practice at the time of his death. He is survived by his wife, his father, the Rev. L. M. Genzmer, of Pittsfield, Mass., two brothers and a posthumous son who was born on February 4, 1920.

NEW YORK STATE MEDICAL LIBRARY.

Edited by Frances K. Ray.

RECENT ACCESSIONS.

- American Medico-Psychological Association. Proceedings. v. 25. 1918.
 Bayliss, W. M. Introduction to general physiology. 1919.
 ———. Intravenous injection in wound shock. 1918.
 Browning, C. H. and Watson, David. Venereal diseases. 1919.
 Bullova, J. G. M. Colloids in biology and medicine. 1919.
 Byam, Major W. and others. Trench fever, a louse-borne disease. 1919.
 Cameron, H. C. The nervous child. 1919.
 Carter, H. S. Diet lists of the Presbyterian hospital, New York City. 2d ed. 1919.
 Congrès dentaire interalliés, Paris. 1916. Comptes rendus. 2v. 1917.
 Dorland, W. A. American medical dictionary. 10th ed. 1919.
 Egbert, Seneca. Manual of hygiene and sanitation. 7th ed. 1919.
 Elliot, R. H. Glaucoma. 1918.
 Foster, Michael and Gaskell, J. F. Cerebro-spinal fever. 1916.
 Ghon, Anthon. Primary lung focus of tuberculosis in children; translated by D. B. King. 1916.
 Goodnow, Minnie. Outlines of nursing history. 1919.
 ———. Practical physics for nurses. 1919.
 Hinshelwood, James. Congenital word-blindness. 1917.
 Holmes, G. W. Roentgen interpretation. 1919.
 Jones, Ernest. Papers on psycho-analysis. Rev. and enl. ed. 1919.
 Lewis, Thomas. Soldiers' heart and the effort syndrome. 1919.
 Mackenzie, (Sir) James. The future of medicine. 1919.
 ———. Symptoms and their interpretation. 3d ed. 1918.

- Muir, Robert and Ritchie, James. Manual of bacteriology. 7th ed. 1919.
- National league of nursing education. Proceedings. 1918.
- New York State Pharmaceutical Association. Proceedings. v. 41. 1919.
- Palmer, M. D. Lessons on massage. 1918.
- South African Institute for Medical Research. Publications. no. 1-date.
- Southall, J. P. C. Mirrors, prisms and lenses. 1918.
- Stelwagon, H. W. A treatise on diseases of the skin for advanced students and practitioners. 8th ed. 1916.
- Stiles, P. G. Human physiology. 2d ed. 1919.
- . Nervous system and its conservation. 2d ed. 1917.
- Stitt, E. R. Practical bacteriology. 5th ed. 1918.
- Thomson, St. Clair. John Coakley Lettsom. 1918.
- U. S. Surgeon-General's office. Report of the Surgeon-General of the U. S. Army. 1919.
- Walsh, J. J. History of medicine in New York: three centuries of medical progress. 5 vol. 1919.
- Whipple, G. C. Vital statistics: an introduction to the science of demography. 1919.
- White, W. A. Thoughts of a psychiatrist on the war and after. 1919.
- Wrightson, H. A. Games for children's development. 1918.

NEW CURRENT PERIODICALS.

- Archives of dermatology and syphilis. (Succeeding Journal of cutaneous diseases.)
- Revista médica del Uruguay.

ALBANY MEDICAL ANNALS

Original Communication

THE SIGNIFICANCE OF TRANSIENT LOCALIZED PERICARDIAL FRICTION IN CORONARY THROMBOSIS (PERICARDITIS EPISTENOCARDICA).

(A REPORT OF SIX CASES WITH THREE AUTOPSIES.)

BY L. WHITTINGTON GORHAM, M. D.,

Clinical Professor of Medicine, Albany Medical College.

During the past five years there have come under my observation a small series of cases of acute cardiac disturbance in older people, which presented such characteristic and analogous features that the diagnosis of coronary thrombosis was made in each case, and later confirmed by autopsy in three instances. The purpose of this paper is to record the symptom-complex as illustrated by the following case histories, a chapter which is not comprehensively dealt with in the current texts of medicine, and to further call especial attention to the importance of pericardial friction as an aid in the diagnosis of coronary thrombosis, a fact which has thus far escaped general recognition.

CASE I. A professional man, 63 years of age, who had been under observation for several years for a mild glycosuria, though otherwise entirely well, was suddenly taken while walking up hill with a severe substernal pain, causing him to sit down on a door step. The pain eased up and he rode home. Four hours later, while sitting in a chair, he was seized with a most terrific substernal pain. There was radiation to the left shoulder and side of the neck. Morphine, grain $\frac{1}{4}$, given hypodermatically and repeated in one hour, with nitroglycerine, grain $\frac{1}{100}$, every

five to ten minutes, for ten doses, failed to relieve the agonizing pain and restlessness, which lasted four hours. The pulse rate was 100, the blood pressure 180 systolic,—40 points above the normal level for the patient. The cardiac dullness was not increased, the heart's action was rapid but regular, and an apical systolic murmur which had been present for years was audible. The patient belched a great deal of gas. The rest of the physical examination was negative, corresponding to that which had been made some months previously.

The next morning the patient complained of soreness over the heart, increased by the slightest turning in bed. At this time the pulse rate was still elevated, and the systolic murmur at the apex had disappeared. The temperature was 100 degrees F. and the white blood count 18,000. The following day, forty hours after the onset of the attack, a faint to and fro friction rub over the heart was heard by a consulting physician. Careful examination of the lungs revealed nothing abnormal. The friction disappeared, never to return, after about six hours. The temperature and blood pressure dropped to normal.

After a few weeks the patient could walk about, but pain and tachycardia were brought on by the slightest exertion. Under prolonged rest and small doses of digitalis, his condition improved and the systolic murmur returned with the strengthening of the heart muscle. At the present, five years after the attack, the patient is at work, but finds that fast walking or unusual mental excitement will bring on the pain. This can be relieved in a few minutes by nitroglycerine.

CASE II. An hotel keeper, 54 years of age, was admitted to the Medical Service of the Albany Hospital on October 26, 1917. His chief complaint was shortness of breath accompanied by pain in the pit of the stomach. For two months previous to this he had suffered with abdominal distress, anorexia and occasional vomiting after over-indulgence in alcohol. The sleep had been poor, and dyspnea had been a constant symptom. He became gradually worse until October 25th, the day before admission to the hospital, when he was seized at night with a sudden, extremely severe pain, localized in the epigastrium and right hypochondrium. His local doctor suspected a gall-stone attack, and sent him to the hospital. The past history showed that the patient had severe tonsillitis and quinsy twenty years ago. He had felt distress after eating for several years past, and dyspnea on exertion for six months. He denied venereal infection, but admitted the excessive use of tobacco and alcohol.

On admission there was orthopnea, dyspnea and an ashy grey cyanosis. Temperature 100.4 degrees F., pulse 112, respirations 27. The lungs showed dullness at both bases behind with suppressed breath sounds, elsewhere hyperresonant. Fine rales were present throughout the chest, especially marked at the bases. The relative cardiac dullness was greatly increased, measuring 7 c. m. to the right of the mid-sternal line, and

reaching 13 c. m. to the anterior axillary line on the left. The apex beat was not visible or palpable. The heart sounds were barely audible, no murmurs and no accentuation being made out. At the base only the second pulmonic sound was audible. No friction rub was heard. The pulse was rapid, regular, small volume, low tension, and the vessel wall not thickened. The blood pressure was 90 mm. Hg. systolic, and 70 diastolic. The liver was enlarged, the edge reaching three finger-breadths below the costal margin. It was exquisitely tender. No gall bladder enlargement or tenderness could be distinguished. The splenic dullness was increased. The abdomen was flat, with dullness in the flanks. There was slight edema of the ankles. Physical examination was otherwise negative.

The twenty-four hour urine measured 1050 c. c., pale, acid, spec. gr. 1.026, albumin, faint trace, sugar, negative. microscopically, an occasional hyaline and granular cast. The renal function by the Phenolsulphonephthalein test was 37 per cent.

The Wassermann was negative. The white blood count was 7,600. The Non-Protein nitrogen of the blood was 34 mg. per 100 c. c. Creatinine of the blood was 0.5 mg. per 100 c. c.

The electrocardiogram showed a retarded A-V conduction time, the P-R interval measuring 0.25 secs. (beyond 0.2 sec. = first stage of heart block, never found in healthy hearts). The waves in all leads were abnormally small.

To summarize, we have a patient who for some months showed signs of moderate cardiac insufficiency, suddenly presenting signs of acute dilatation of the heart with decompensation, and congestion in his lungs, liver, abdomen, kidneys and legs. The renal involvement may be primary to a certain degree, but the kidney function is certainly depressed (phthalein 37%) by the passive congestion, and so must be in part at least secondary to the heart.

On October 27th, the day following admission, a soft to and fro friction rub was heard in a small localized area in the fifth interspace, 4 c. m. from the mid-sternal line. This was present in the morning, and had disappeared five hours later the same day. Dr. Thomas Ordway and one of the house officers verified this finding.

Under large doses of digitalis and restriction of fluids, the heart gradually regained its compensation, the temperature reached normal on the fifth day, and the patient left the hospital on November 10th, seventeen days after admission. The friction rub was audible more or less constantly from October 28th to November 7th, when it disappeared for good.

After this he was able to do some very light work, although conscious at times of his heart. One night shortly after falling asleep in his bed, he awoke, called for his medicine, and fell over suddenly on his face dead—some three months after leaving the hospital. Post-mortem examination was not possible.

CASE III. A lawyer, aged 57, whose health had been excellent, although he was slightly overweight and had been leading a sedentary life, was taken with severe pain under the middle of the sternum on Monday, December 24, 1917. This was several hours after luncheon, and while walking up a rather steep hill. The pain ceased when he sat down to rest. The next day after his evening meal the pain came on again when he was walking, but ceased on resting. It returned in the evening with much belching of gas, and the patient was inclined to believe there must have been some dietary indiscretion. About an hour after going to bed he was suddenly awakened from sleep by an agonizing pain under the sternum, of the same character as the preceding pains, but decidedly more severe. He was first seen at 3 A. M. His chief difficulty was severe pain, which manifested itself in an extreme restlessness and an effort to vomit or belch gas. The pain was substernal, not radiating to the arm, and the patient was constantly changing his position walking, lying down, and sitting up in an effort to lessen its severity. Careful physical examination was not made at this time. The color was gray, with but slight cyanosis. The pulse was 100, full, bounding, high tension. There was no radiation of pain to the left arm. The temperature was 98.8, and the respirations 20. There was no edema of the ankles. Morphine gr. $\frac{1}{4}$ by hypodermic followed by gr. $\frac{1}{8}$ failed to relieve pain. Nitroglycerine in full doses, gr. 1/100 until 1/10, which had been given in an hour, also gave no relief. Four hours later the patient felt easier.

Physical examination the next morning, December 25th, showed an ashy cyanosis, slight edema at the bases of the lungs, increase of the cardiac dullness to the right, rather distant regular heart sounds, and a delicate to and fro friction rub. The pulse was 92, blood pressure 120 systolic, 70 diastolic, respirations 22, temperature 98. Physical examination otherwise negative. At 6 P. M. the pulse was 100, temperature 99.6, respirations 22.

The patient had fever up to 101 for five days, with pulse averaging 110 to 120, respirations 22 to 24. The friction came and went. Under rest and digitalis gradual improvement occurred, with normal pulse, temperature and respirations after the ninth day, and disappearance of the friction rub after about two weeks. The cyanosis and the edema had decreased. Suddenly, without warning on January 30, 1918, the thirty-seventh day after the onset, the patient died in bed.

An autopsy in this case verified the diagnosis of coronary thrombosis, which had been made. Dr. Thomas Ordway, who saw the patient in consultation, performed the post-mortem examination.

Post-Mortem Examination. The body is that of a well-developed and nourished, somewhat obese, white adult male, 58 years old. There is very slight rigor mortis and slight lividity of dependent parts, back and buttocks. The pupils are midwide. The chest is very short superiorly and

inferiorly. Body is 5 feet 6 inches in length. The diaphragm on the right at the fourth rib, on the left, fourth space.

Peritoneal Cavity. The peritoneum is smooth and glistening. There are no adhesions. There is no free fluid. The stomach and intestines are considerably distended with gas.

Pericardial Cavity. Shows no adhesions. The pericardium is smooth, moist and glistening. There is an excess of clear, straw-colored, serous fluid, about 200 c. c.

Pleural Cavity. Normally smooth and glistening. There are no adhesions.

Heart. The right side of the heart is considerably dilated (extending 2.5 inches to the right of the median line. Left border is 3.5 inches to the left of the median line). Weight is about 300 grams. The left ventricle is markedly dilated and the wall is generally thin. At the tip the wall is made up almost exclusively of epicardial fat. The myocardium in this region is represented by a very thin layer of brownish tissue less than a millimeter in thickness. From this portion of the heart upward the anterior wall of the left ventricle and the area supplied by the anterior branch of the left coronary artery is markedly thinned, softened. There is a yellowish area apparently of necrosis in the mid portion of the remaining myocardium in this region, on the endocardial sides of which there is a thin brownish yellow layer of tissue representing the myocardium. On the anterior surface of the left ventricle over this area of softening above described there is slight roughening of the epicardium and irregular areas of ecchymosis. *Note.* This roughened area over the area of softening (infarction) apparently gave rise to the recurrent localized friction rub heard in life, the recurrent character possibly being due to the varying amount of fluid in the epicardial sac

The right coronary artery is narrowed at the opening by definite deposit of calcified material. The rest of the right coronary artery is entirely clear and smooth. The left coronary artery 1 cm. below its opening is markedly narrowed by contraction of the small area of yellowish thickening and the lumen is entirely occluded by a friable reddish thrombus. 1 c. m. below this there is another small area of narrowing without thrombosis but with the presence of calcification. The other portions of the coronary arteries outside of this down to the fine branches are smooth and show no evidence of narrowing or thickening. The aortic valves at the extreme base are thickened and show deposition of lime but there is apparently no impairment in the flexibility of the distal two-thirds of the individual pockets. The other valves are normal. The myocardium showing through the entire surface of the papillary muscles has a distinct yellow to grayish mottled appearance.

Lungs. Posteriorly both lower lobes appear in their dependent portions collapsed and rigid, non crepitant and leathery. This condition ex-

tends about 2 cm. from posterior pleura. Otherwise the lungs are normally crepitant. On section a moderate amount of frothy fluid exudes.

Liver. Weight and size normal. On section there is distinct congestion of the central veins giving a moderate, so-called nutmeg appearance. The consistency is slightly diminished. The gall bladder and biliary passages are normal. There are no stains.

Spleen. Size and weight normal. Capsules smooth. On section a very small amount of pulp comes away on scraping the surface.

Gastro-Intestinal Tract. Stomach and duodenum small and large intestine normal.

Pancreas. Is embedded in a large amount of fat tissue and the fat is apparently infiltrated and separates the lobules of pancreatic tissue so that they appear as grayish, slightly opaque areas on a yellowish background. There are a few chalk-like pin head size fissures suggesting fat necrosis.

Adrenals. Are embedded in abundant and retroperitoneal fat and are extremely friable and very small, and although the post-mortem examination was made within a few hours of death the adrenals were extremely friable opening into the medulla.

Kidneys. Are normal in size and weight. The capsule stripped freely leaving smooth surface. The peri pelvic fat is markedly increased with the corresponding diminution of the renal parenchyma. The ureters and bladder are normal and also genital organs. Left testicle is undescended and is almost completely atrophied being represented by the small white nodule about it. It is 0.1 cm. in diameter. The right testicle is somewhat enlarged, measuring about 4 x 3 c. m. in diameter. The tubules string freely. There is slight increase of clear, serous fluid in the tunica vaginalis. Genital organs otherwise negative.

Aorta. The ascending, transverse and descending aorta in the thorax appear normally smooth and flexible. The abdominal aorta: in the upper portion there are numerous elevated dull areas from 0.5 cm. to 2 cm. in diameter. In the lower abdominal area down as far as the bifurcation there are numerous areas of calcification and just above the bifurcation calcified plaques have become broken, and there is friable reddish material extending to the bodies of the vertebra 0.5 cm. in thickness. The caliber of the abdominal arch is extremely small, not larger than that normally present in a young woman.

Anatomical Diagnosis. Localized focal pericarditis.

Arteriosclerosis and thrombosis of left coronary artery.

Cardiac infarction.

Acute and chronic myocarditis.

Dilatation of left ventricle.

Hypoplasia of aorta.

Arteriosclerosis of aorta with ulceration and thrombosis.

Atelectasis of lung—posterior portion of lower lobes.

Fatty infiltration of pancreas.

Chronic nephritis (increase of peri-pelvic fat).

Atrophy of left testicle.

CASE IV. This patient was observed by Dr. Hermon C. Gordinier who has kindly allowed me to publish his notes with my other cases.

The patient was seen in consultation September 5, 1917, at Arlington, Vt. Mr. P., aged 62 years; a railroad man. He had for a period of about two years been the subject of mild attacks of angina pectoris manifested by pain of a constricting like character, substernal in location and referred to the left shoulder and down the left arm in the ulnar distribution. He had been under a New York physician's care for hypertension and an enlarged heart.

Four days previous to my visit he was suddenly seized shortly after returning from a long automobile trip, he having driven his own car, with the most excruciating substernal pain, great pallor and sensation of impending dissolution which was only relieved by repeated doses of nitroglycerine and $\frac{1}{2}$ gr. of morphia hypodermically. Two days later, having in the interim suffered no precordial anxiety, he was taken with another similar attack to the above, though milder in character. Soon thereafter he became very dyspnoeic, was cyanosed, very nervous and restless and unable to sleep. His facial expression was pinched and he was very pale with lips violaceous, his pulse which before had been regular and slow at the rate of 68 with a systolic blood pressure registering 190 m. m. hg., was now rapid, easily compressible and very irregular, his systolic pressure had dropped to 110 and his diastolic to 70. His heart action was tumultuous and a soft systolic murmur was heard at the apex and faintly conducted to the left "relative incompetency." Many large subcrepitant rales were heard at the base posteriorly. My opinion was that following the onset of the second attack of angina pectoris, a large branch of one of his coronary arteries became plugged with a thrombus and accordingly gave a very grave prognosis.

I saw him two days later and found him in extremis with all the above-mentioned symptoms greatly exaggerated and in addition a localized fresh pericardial friction rub heard over the body of the right ventricle at the level of the fourth costal cartilage. He died the following day and despite our entreaties, no post-mortem examination was allowed.

The interesting features of this case were the sudden onset following an anginoid attack, of grave myocardial insufficiency and auricular fibrillation, sudden fall of blood pressure, development of relative mitral incompetency and the sudden appearance of a localized pericardial friction rub.

CASE V. A lawyer, 76 years of age, had been under observation for five years. Repeated careful examinations at yearly intervals had shown

him to be in excellent health, except for a well-compensated mitral insufficiency. He had two fainting attacks during this period and had been cautioned not to overtax his heart. He was wakened from sleep at 6 A. M. on the morning of September 26, 1919, with epigastric pain described as a sense of suffocation and oppression. He vomited. The doctor who first saw him thought the symptoms due to acute indigestion from salad and ice-cream eaten the night before.

At 9 P. M. the pain was still present, only moderately severe, and the patient was very restless. He looked ill. Temperature 100.6, pulse 120, respirations 24. He was coughing, and a frothy sputum, once only with a brownish blood tinge was being raised. The respiration was peculiarly wheezy, suggesting acute emphysema, with coarse, musical rales over the left lung, and fine crepitant rales at the right base, on which side he was lying. Thus far the examination certainly suggested bronchopneumonia. Examination of the heart showed the right border 1 c. m. beyond sternal edge. The sounds were rather distant, and the systolic murmur of years' standing had disappeared. With the breath held a short, very faint leathery sound, systolic in time, suggesting pericardial friction was heard over a small area inside the apex. Coronary thrombosis with edema of the lungs, or a pneumonia were considered as the probabilities. At 10.30 the next morning a well-marked to and fro friction rub was audible over the heart in the fourth and fifth interspaces inside the apex, and the tentative diagnosis of coronary thrombosis, was then considered to be certain.

Subsequent course: September 29. Temperature 99.2, pulse 96, respirations 24. The pain has gradually decreased and the patient is resting quietly, although the slightest movement causes some pain over the heart. The pulse is of fair quality, with occasional premature ventricular contractions. The friction rub has almost entirely disappeared and can be heard only quite faintly today over the middle of the sternum at the level of the third intercostal space. The systolic murmur is still absent, and both heart sounds are very distant, being heard best to the right of the sternum. There is no increase in the area of cardiac dullness. There are fine rales at the base of the right lung, which are due to edema.

September 30. Patient had a very good night. Temperature 98, pulse 88, respirations 24. He now lies on his back instead of on the right side, and the edema of the right lung has markedly diminished. The heart sounds are somewhat less distant, the rhythm more regular, and faint friction is audible over the sternum, at the level of the fourth intercostal space. Sputum raised this morning is mucoid and free from blood.

October 1. Temperature 99, pulse 82 respirations 22. The heart's rhythm is regular today, the sounds are of about the same intensity, but the friction rub has disappeared entirely. Blood pressure 112 mm. Hg. systolic, 70 mm. Hg. diastolic.

October 3. Sharp severe pain in the heart at 2 A. M. awakened patient

from sleep. Ten hours after this temperature 100.4, pulse 98, respirations 24. The friction rub has returned and is clearly audible again, while the edema at the right base is more marked. A second thrombosis or an extension of the first, seems probable.

October 5. Temperature 98.2, pulse 120, respirations 24. The pulse is very rapid, thready and irregular. The heart sounds are very weak, the auricles are evidently fibrillating, the friction is indistinctly heard and the entire right lung from base to apex shows the rales of increasing edema.

October 6. Temperature 98.6, pulse 88, respirations 22, occasional premature ventricular contractions, systolic murmur at apex barely audible. Friction rub not definite.

October 16. Since the last note, patient's condition has remained stationary. He has been afebrile, pulse 80 to 100, slightly irregular at times, respirations 20 to 24. The edema in the lower half of the right lung has persisted. Today for the first time a loud to and fro friction rub is audible well to the right of the sternum, outside the nipple line, and at a level of the fourth intercostal space. This is most distinct with the patient lying on his right side. The border of cardiac dullness now reaches nearly the nipple line on the right. It seems certain that the right heart is dilating and that probably in addition an aneurism of the heart wall has formed. This deduction is made from the fact that the friction has appeared at a point far to the right, suggesting an increase in the area of myomalacia beneath it.

October 17. The sputum which has been white and frothy for ten days, showed heavy traces of bright red blood today. This suggests an area of pulmonary infarction.

October 18. Temperature 98, pulse 108, respirations 24. Patient is restless and seems much weaker. He speaks with difficulty, coughing frequently and raising blood streaked sputum. The pulse is threadlike, there is gallop rhythm at the apex and increasing edema of the entire right lung.

October 23. Cheyne-Stokes respiration appeared yesterday, gradual cardiac failure with edema of the lungs. Patient died, twenty-seven days after the onset.

Clinical Diagnosis. Coronary thrombosis, Fibrinous pericarditis, with probable parietal aneurism, edema of the lungs, and possible pulmonary infarction.

Post-Mortem Examination. The autopsy was performed by Dr. George S. Graham, pathologist of the Albany Hospital, and his report follows:

Body is that of a white man, estimated slightly over 6 feet in height. No external marks.

Abdominal Cavity. Negative.

Pleural Cavity. Left contains about 400 cc. clear fluid.

Right contains about 150 cc. In the right cavity there are occasional

recent fibrous strands between the pleural surfaces. There are old fibrous adhesions at the left apex.

Heart. The heart measures 16 x 13 x 7 cm. in its greatest diameters, in fixed and injected condition. In the first attempt to open the pericardial sac with scissors, the heart being still in situ, the pericardium and the underlying greatly thinned and adherent wall of the left ventricle were unintentionally incised together, permitting the escape of blood from the left ventricle. The incision is found to have been made at approximately the middle portion of a bulging darker colored area 5 cm. in diameter in the wall of the left ventricle. The pericardium is closely adherent over this whole area, the adhesions extending downward over the apex, and laterally so as to involve the lower posterior portion of the sac. The free portions of the cavity anteriorly show a slight velvety fibrinous exudate of recent formation.

The coronaries were injected with a suspension of bismuth and gelatin, and the organ hardened in formalin. Serial transverse sections through the hardened organ show an extensive area of aneurysmal dilatation of the whole anterior wall of the left ventricle. The area of thinning and dilatation centers as mentioned approximately at the site of the primary accidental incision, i. e., about 5 cm. above the tip of the left ventricle. The ventricular wall is here reduced to a thickness of very little more than one millimeter. Laterally the wall slowly increases in thickness. The softening and thinning involve all but a narrow posterior strip of the left ventricular wall which retains its normal thickness and appearance. The degenerative process extends downward involving practically the entire circumference of the ventricular wall at the lower levels, while superiorly the necrotic tissue becomes more and more confined to the anterior wall. The upper level of the dilatation lies approximately 8 cm. above the apex. There are evidences of necrosis unaccompanied by thinning and dilatation at a level 9 cm. above the apex. The aneurysmal dilatation is filled with an extensive blood clot that reaches a thickness of 3.5 cm. and shows evidences of early organization. The left ventricular cavity retains about its normal size. It contains a post-mortem clot.

The left coronary artery shows marked sclerosis with thickening and calcification of its walls. Four cm. below its orifice the lumen of the ramus descendens anterior is rather suddenly contracted, so that the injected channel appears in the gross to be slightly less than 1 mm. in diameter. About 1.5 cm. below this level the lumen has again enlarged to a diameter of 2 mm. At this level the injected lumen appears to extend laterally as though occupying a lateral sacculation of the wall. The original circle of the vascular structure appears as if completely filled by a dense calcified tissue.

The first evidence of myomalacia in the cardiac wall appears at a level of slightly over 4 cm. below the orifice of the left coronary artery. At

a level of 5.5 cm. below the coronary orifice the vessel has a lumen of 2 mm. and the walls show relatively slight thickening.

At the next level of transverse section 1.2 cm. lower, the vessel is not distinguishable, and the muscular wall has become necrotic and thinned by the aneurysmal dilatation.

Lungs. Left: There are old healed surface scars at the apex. The lung is somewhat boggy but crepitant. The apex, and tract extending toward the hilum, of the upper lobe are firm, slightly elevated, rather sharply marked out, and of a dusky red color, contrasting with the rather dull reddish gray of the remaining lung tissue. On section the lung tissue exudes large amounts of frothy fluid. This condition is much more marked in the upper lobe, and the fluid probably escapes from the darker red portions corresponding to the surface markings noted. The dark red portion is, at least along one side sharply outlined, and extends as a narrowing area toward the hilum.

Right: There are a few scars at the apex. The posterior portion of the upper lobe is dusky red and on section holds considerable fluid. The lower and middle lobes are generally moist with some variation of the color.

Liver. Estimated weight, 1,400 grams. Surface slightly nodular. Small portion removed for sections shows markings distinct.

Gastro-Intestinal Tract was examined in situ. No evidence of pathologic condition.

Pancreas. Negative.

Spleen. Weight, 65 grams. On section dark red. The markings are distinct. Fibrous trabeculae rather prominent.

Kidneys. Right: Weight, 120 grams.

Left: Weight, 95 grams.

On surface of right there are two subcortical cysts, the larger 3 cm. in diameter. Capsule strips without particular difficulty leaving a finely granular surface. On section the cortex is .6 to .4 cm. It often shows radiating dark red areas alternating with those of lighter color. In the latter glomeruli are made out somewhat indistinctly. On the whole cortical markings do not appear distorted. The pelvic fat is slightly increased.

Left kidney is distinctly smaller than the right. The capsule strips without particular difficulty but leaves a surface markedly granular rather firm and with occasional larger pittings. Cortex averages .4 cm. Pelvic fat increased. Markings appear somewhat distorted.

Adrenals. Negative.

Pelvic Organs. Negative.

Aorta. External palpation indicates the presence of occasional patches of sclerosis but no extensive change is indicated.

Anatomical Diagnoses. Arteriosclerosis and thrombosis of the left coronary artery, ramus descendens anterior.

Acute fibrinous and chronic adhesive pericarditis.

Cardiac infarction, with myomalacia cordis and parietal aneurism of the left ventricle.

Pulmonary infarct, left upper lobe.

Edema of the lungs and bilateral hydrothorax.

Chronic nephritis (slight).

CASE VI. A business man, 60 years of age, who had always been very active, and had never previously suffered from serious heart disease or from any other illness. Careful questioning revealed that during the past year he had noticed some flatulence and slight dyspnea on walking rapidly uphill. On November 17, 1919, when about to be called upon to speak at a banquet, he was taken with a very severe pain under the sternum, which radiated to the back, and down both arms. The attack lasted over two hours. Slight reminders of the pain occurred while at his office on the three following days, accompanied by flatulence. He attributed these symptoms to an "upset stomach."

On November 20th he was seized with an excruciating pain of greater intensity than the first, but of the same character.

He was first seen a few hours after this lying in bed, very restless and apparently suffering much pain. His color was gray, but there was no definite cyanosis. The temperature was normal, the pulse 62, and the respirations 18. The lungs were normal. There was no increase in the area of cardiac dullness. On auscultation the sounds were of moderate intensity, regular, with soft blowing systolic murmurs at the mitral and aortic areas. A peculiar scratching accompanies the first sound at the level of the fifth costal cartilage, at the right edge of the sternum. This is not a typical friction rub. Abdominal examination was negative. There was slight pre-tibial edema. The urine was normal except for a slight trace of albumin, and the blood pressure was 170 mm. Hg. systolic, and 90 mm. Hg. diastolic.

The diagnosis of coronary thrombosis was made provisionally. The subsequent course of the case made this diagnosis quite certain. The pain and soreness over the heart persisted. Slight fever, 99 to 100 was noted for a few days. The myocardium gradually became incapable of doing its full work, with consequent increasing dilatation of the right heart, edema of the lungs, and falling of the blood pressure from 170 mm. Hg. to 100 mm. Hg. systolic. The heart sounds grew feebler, the murmurs disappeared, and the pulse rate became more and more rapid. One could never distinguish a typical to and fro friction rub in this case, although on one occasion it was very suggestive.

The patient died suddenly on December 5, 1919, eighteen days following the first symptom.

Post-Mortem Examination. The autopsy was performed by Dr. L. J. Early, whose report is as follows:

The body is that of a well developed and well nourished white male adult. Rigor mortis is present and post mortem lividity is present in the dependent portions. The skin of the scrotum shows a bluish red discoloration, and is dried and fissured.

Peritoneal Cavity. The surfaces are smooth, moist and glistening. Between the upper ileum and descending colon there are a few rather delicate adhesions.

Pleural Cavities. The surfaces are smooth, moist and glistening. The right contains about 200cc. and the left 350cc. of clear straw colored fluid.

Pericardial Cavity. The pericardium is markedly distended. On section, a large amount of blood stained fluid is found filling the cavity and in it there are numerous fresh clots of blood.

The visceral pericardium is covered with a blood clot throughout, which forms a mould of the heart. It varies in thickness being greatest in amount over the right auricle where a clot measuring 9x6x2.5 cm. is found. Over the right ventricle it measures 3-4 cm. in thickness. Over the left ventricle it measures 8-11 mm. in thickness on the anterior surface and about 5 mm. in thickness on the posterior surface. The surfaces of the clot are slightly irregular and show a granular "bread and butter" appearance which corresponds to a similar appearance on the parietal pericardium. In some areas the clot is smooth and glistening, the superficial layer having been stripped off with the parietal pericardium. Serial sections transverse through the long axis of the heart reveal an area of softening located about 6.5 cm. from the apex in the posterior part of the left ventricular wall. This area on section measures 3.5x1 cm. and is approximately 2.5 cm. in length. It is yellowish grey in color and sharply demarcated from the surrounding heart muscle which is brownish in color. At about its centre it shows a dark red discoloration of the same color as the clot which represents the point of rupture. The remainder of the heart muscle varies in color from light brownish grey to a somewhat darker hue. The left ventricular wall measures 20-21 mm. in thickness, the right ventricular wall 7-8 mm. in thickness. There is a layer of epicardial fat 7 mm. in thickness over the anterior surfaces of the right and left ventricles. The coronary arteries are sclerosed and calcified and the circumflex branch of the left coronary on a level with the mitral valve shows a thrombus in the lumen, approximately 4 cm. from the orifice in aorta. This thrombus shows a red centre and a greyish periphery and appears to the naked eye to be definitely adherent to the wall. The mitral valve leaflets show raised yellowish patches. The aortic leaflets are similarly involved and likewise the ascending aorta.

Lungs. Crepitus is present in the upper lobes and absent in the lower which are of soft leathery consistency. The right upper lobe shows a depressed, firm scar at the apex. The cut surface of the upper lobes is

greyish pink in color and a moderate amount of frothy fluid exudes. The cut surface of the lower lobes is deep red in color, moist and glistening. On pressure a small amount of amber fluid exudes.

Liver. It appears normal in size, consistency and friability. The cut surface is brownish red with small dark red spots in the centre of the lobule, resembling the nutmeg appearance.

The gall bladder and bile ducts are normal.

Spleen. In size it is normal. It is slate blue in color. On palpation a firm nodule is found in the posterior pole. On section there is found a raised area measuring about 2x2cm. irregular in outline and firmer in consistency than the surrounding skin. Its color varies from pale red to reddish grey. Other sections reveal smaller grey triangular areas with the base of the triangle toward the capsule surrounded by a bright red zone about 1 mm. in diameter.

Kidneys. There is a large amount of peri-renal fat. The kidneys are normal in size. Capsule strips easily leaving a slightly granular surface. The cortex measures 4 to 5 mm. The markings are blurred in some areas. The cut surface is greyish red in color and the glomeruli are visible as minute glistening dots. The branches of the renal artery are normal in appearance. Pelvic fat is increased in amount. The pelvis and ureters are normal. The adrenals are negative. The bladder is negative. The prostate is small and appears negative.

Pancreas. It is firm, greyish in color and the lobulations are distinct.

Gastro-Intestinal Tract. On exterior examination the stomach, small and large intestines are normal.

The appendix is negative.

Aorta. It shows numerous small raised light yellowish areas, some of which are calcified.

Anatomical Diagnoses. Arteriosclerosis and thrombosis of the left coronary artery, ramus circumflexus.

Cardiac infarction, resulting in myomalacia of posterior central portion of left ventricular wall.

Rupture left ventricular wall.

Hemopericardium—Blood clot undergoing organization.

Edema of lungs with slight bilateral hydrothorax.

Atelectasis lower lobes of lungs.

Old infarcts of spleen.

Chronic nephritis (slight).

A review of the histories of these six cases finds certain points of similarity in all of them as follows:

1. A sudden agonizing attack of pain usually substernal, frequently radiating to the left arm of decidedly longer duration than that occurring in an attack of ordinary angina, and often

lasting for several hours. Following this, pain or soreness over the heart may persist for some days. The pain in some cases is referred to the epigastrium and an acute abdominal condition of a surgical nature may be suspected, such as an acutely infected gall bladder, a perforated gastric or duodenal ulcer, or acute pancreatitis. The patient looks shocked with ashy gray, moist skin, and a rapid, easily compressible pulse. Such cases have been operated upon.

2. The presence of fever coming on usually in 24 hours, and lasting four or five days. The patients are clear mentally, but restlessness is often extreme. Leucocytosis may be present.

3. A pericardial friction rub, frequently of light intensity, developing within the first few days, transitory in nature, often recurrent, and localized over a small area. Such a rub may be readily overlooked, unless one carefully and repeatedly seeks for it. This was present in five of the six cases. Failure to hear it in one case (No. VI) may possibly be explained by the fact that the infarcted area was on the posterior surface of the left ventricle, and that hemopericardium developed.

4. Signs of cardiac decompensation of varying degree. One may generally note tachycardia, arrhythmia, feeble heart sounds, a falling blood pressure, increase of cardiac dullness to the right, the disappearance of a systolic murmur present before the attack, or the appearance of a relative mitral murmur, signs of edema of the lungs (râles, cough, cyanosis), albuminuria from congested kidneys and in the late stages general edema.

The reaction of this group of cases to the three drugs, nitroglycerine, morphine, and digitalis was most interesting. At the beginning of the attack large doses of nitroglycerine and morphine failed to relieve the pain to any great extent; 1/100 grain of the former every ten minutes for ten doses and gr. $\frac{1}{2}$ morphine by hypodermic, did not produce the relief which one usually obtains in the ordinary attacks of angina pectoris. In the fatal cases (III, V, and VI) that died 37, 27, and 18 days respectively after the first attack of pain, large doses of digitalis were given, but in spite of full digitalization the portion of intact cardiac muscle remaining was unable to compensate for the large

infarcted area, so that myocardial insufficiency although possibly deferred a short time ultimately caused death. In case I, the thrombosed vessel and the amount of myomalacia must have been decidedly smaller than in the preceding cases. Under rest and the prolonged administration of small doses of digitalis time was given for the establishment of compensation and possibly for the development of collateral circulation. In any event the patient is still living to-day, over five years after the attack, and is able to work actively.

Case II lived for three months after his first attack. In this instance rest and digitalis temporarily restored a decompensated heart, so that the patient was able to be up and to walk about his home.

If one thinks of the pathologic picture it is easy to understand why these three drugs,—nitroglycerine, morphine, and digitalis, usually so powerful in their pharmacological action, fail to produce their usual effects in these cases.

In studying the past histories and physical condition of these patients we find that the age was 54 years or above.

Previously existing sclerosis of the heart or blood vessels may be present associated with hypertension, but coronary thrombosis may occur where recent physical examination has failed to detect evidence of cardiac or vascular disease.

The patient may or may not have had attacks of angina pectoris preceding the seizure. There may or may not be an immediate cause for the attack such as over-exertion, over-eating or excitement.

In view of the definite and similar character of the above symptom-complex in all six cases, and the pathologic proof substantiating the diagnosis in three instances, it seems fair to assume that all the other cases were instances of coronary thrombosis of varying degree. The friction rub was of considerable importance in establishing the diagnosis.

On turning to the literature one readily finds allusions to this clinical picture, although the text books and Systems of Medicine do not mention the occurrence of pericardial friction in coronary thrombosis. In 1884 Leyden⁽¹⁾ describes such a case in

his work on coronary sclerosis, but fails to interpret it correctly. In 1892 Kernig⁽²⁾ mentions pericarditis following attacks of angina within a few days and in 1905 he⁽³⁾ reported five such cases, without autopsy however. Pawinski,⁽⁴⁾ 1897, observed this clinical picture and quoted cases reported by Bramwell⁽⁵⁾ and Bieganski.⁽⁶⁾ He believed that a latent pericarditis was the primary cause of the angina, and did not develop physical signs until later. As Kernig maintains however Pawinski's cases were of two kinds: the first group contained cases which suffered simply pain, subjective distress, and anxiety in connection with an ordinary pericarditis; the second group was represented by the typical symptom-complex of coronary thrombosis, in which the stenocardia precedes the friction rub.

Huchard⁽⁷⁾ 1899, refuted Pawinski's argument for such an illogical conception and reported a typical case of his own.

Kernig⁽³⁾ reported the following five cases in 1905:

CASE I. An old General K. repeatedly seen for stenocardia-outspoken pericarditis, few days after severe attack—fever, friction rub, and pericardial exudate. Gradually decompensated heart. Death in one year.

CASE II. 47 year old doctor—attack of angina pectoris after physical exertion. Heart dullness increased to right during first few days with weakening of heart sounds—formerly not present. Pain, fever, temperature to 38 degrees C. continued. Friction rub manifest. Recovery after ten days. Capacity for work recovered for long period.

CASE III. 56 year old soldier, heavy smoker. Severe attack of angina after heavy dinner from 8 P. M. till 2 A. M. First attack in patient's life. On third or fourth day fever, enlarged cardiac dullness and enfeeblement of heart sounds. On fifth or sixth day friction rub. The fever lasted twelve days, remittent character, maximum 38.5 degrees C. Patient three weeks in bed. Two days after getting up sudden death.

CASE IV. Merchant 68 years old, previously seen for outspoken attacks of stenocardia, suffered a severe attack in 1902 lasting twenty-four hours. On third day after attack fever and pericardial rub. Fever lasted 2½ weeks. Complete recovery. Summer 1903 and 1904 in Naueheim with good result.

CASE V. Only briefly related from the memory of a colleague—a pericarditis following anginal attack.

There was no autopsy in any of these cases. Sternberg⁽⁸⁾ in 1910 reviewed the literature, and added two cases of his own, one of which came to autopsy.

Sternberg's cases:

CASE I. A 74 year old doctor had an anginal attack one night, the first of his life. He made the diagnosis himself. Temperature rose in the next few days, a little pain continued in the left side of the chest, accompanied by rales at the lower left base posteriorly. A bronchopneumonia was suspected. Then on the fourth day of the illness a distinct pericardial friction appeared, which lasted but a few hours. On the next day the temperature fell and undisturbed convalescence supervened. Since then four years of good health have been enjoyed.

CASE II. In a man 43 years of age, who had syphilis at 19, there appeared asthmatic attacks at night. They were considered by some as due to bronchial asthma, and by rhinologists the result of a hypertrophic rhino-pharyngitis. The finding of Herzfehlerzellen argued for cardiac asthma. Improvement under potassium iodide.

Five years later the first real attack of angina occurred on the street. After the second attack which was unusually severe and prolonged (a true "Status Anginosus" of Huchard), there appeared high fever with a transient pericardial rub. The course was the same as the first case, but an arrhythmia lasted four weeks. Following this were two years of relatively good health. Then asthmatic attacks of increasing frequency occurred with universal hydrops. Death followed $2\frac{1}{2}$ years after the pericarditis.

Autopsy revealed considerable enlargement of the heart, with marked hypertrophy of the left ventricle. On this ventricle was a chronic parietal aneurysm of the heart, including the apex and the anterior surface of the chamber, accompanied by fibrous degeneration of the heart muscle. Over the heart aneurysm were superficial adhesions. The left coronary artery 5 c.m. from its point of origin was almost completely closed by a pillow-like thickening of the intima. Likewise the descending branch on the anterior wall of the left ventricle was thrombosed.

Sternberg calls especial attention to the diagnostic and prognostic significance of this syndrome, and proposes the name "Pericarditis Epistenocardica." His summary of the clinical picture coincides with the one we have found in the six cases here reported. Sternberg points out that in this type recovery occurs in most cases, coronary thrombosis not necessarily being always fatal, that after such recovery a resting stage may intervene during which the anginal attacks are absent or occur much less frequently. The pericarditis may however be followed by a chronic softening cardiac insufficiency and cardiac rupture, or death may intervene during the pericarditis.

Herrick⁽⁹⁾, 1912, stated that although coronary thrombosis may every often prove suddenly fatal, this is not invariably so. He proposed a tentative grouping of coronary thrombosis based on clinical symptoms:

1. Cases of instantaneous death, a group graphically described by Krehl, in which there is no death struggle, the heart beat and respiration stopping at once.

2. Cases of death within a few minutes or a few hours after the obstruction. These are the cases that are found dead or clearly in the death agony, by the physician who is hastily summoned.

3. Cases of severity in which however, death is delayed for several hours, days or months, or recovery occurs.

4. A group that may be assumed to exist embracing cases with mild symptoms, for example, a slight precordial pain ordinarily not recognized, due to obstruction in the smallest branches of the arteries.

It is group 3 in which we are interested, i. e., the cases which recover for a longer or shorter period. It is these cases which survive naturally in which there is time for a fibrinous exudate to form upon the epicardium over the area of muscle which has become necrotic because of its deficient blood supply. Herrick⁽¹⁰⁾ believes that these cases are of commoner occurrence than is generally supposed. He gives an excellent description of the clinical symptoms of coronary thrombosis, stating that a friction rub is sometimes heard. He⁽¹¹⁾ reports three cases with autopsy. He records having heard pericardial friction in two cases. Libman⁽¹²⁾, 1919, in a paper before the American Association of Physicians drew especial attention to points in the symptomatology and diagnosis of coronary thrombosis. He mentions the marked tendency to gastric symptoms, the occurrence of pericarditis, and leukocytosis as helpful points in diagnosis.

It has been generally taught and believed that the diagnosis of coronary thrombosis can be made only at the autopsy table. The basis for this belief, as Herrick⁽⁹⁾ states, has been the idea that the coronary arteries are terminal vessels, i. e., vessels without anastomosis of their branches, and therefore that plugging

of a branch of any size must result in local death of the tissue supplied, with the prompt cessation of the heart beat. Cohnheim's⁽¹³⁾ classical experiment in which he ligated a branch of one of the coronaries, and produced arrhythmia and death of the animal in two minutes, has given weight to the view that coronary thrombosis must necessarily be a very acute and fatal occurrence.

The evidence now at hand is sufficient for us to completely discard this older point of view. Careful studies devoted to the anatomy, pathology, experimental and clinical side of coronary thrombosis have proven beyond a doubt that the coronary arteries are not in the strictest sense of Cohnheim terminal arteries, but that anastomoses although not profuse do nevertheless exist. Granted this existence of such anastomosis, it is possible to understand that cases of coronary thrombosis may live days, weeks, or years, varying with the size of the vessel obstructed and the richness of the anastomosis.

The proof of anastomosis and continuation of life after coronary thrombosis may be given as follows:

1. Anatomical dissections, injections of the arteries with an injection mass, and stereoscopic X-Ray photographs of these vessels previously filled with a suspension of bismuth in gelatin have shown the existence of anastomosis between branches of the coronary arteries.

2. Cohnheim's⁽¹³⁾ experiments have been repeated by Herick⁽¹⁰⁾ and others and it has been shown that although animals usually die at once after ligation of a branch of one of the coronaries, occasionally they may survive for hours or weeks without any serious symptoms, and in some instances entirely recover. These experiments all deal with sudden occlusion, so that it seems fair to assume that individuals may survive in many instances the more or less gradual occlusion of thrombosis.

Sternberg⁽⁸⁾ states, that in looking over the pathological findings of cases reported as coronary sclerosis, fibrous myocarditis, myomalacia and heart rupture in which clinical data is scarce or absent because of sudden death, one finds not infrequently the triad of coronary artery sclerosis, localized areas of heart muscle disease, and pericarditis.

There are two types of autopsy findings:

1. Fresh cases: Recent plugging of a branch or trunk of the coronary artery with necrotic infarct, and pericarditis.

2. Old cases: Old changes in the coronary arteries, scars of myomalacia and partial adhesion of the pericardium over the same.

(a) The scar may be small and superficial. Then there is no effect upon the heart.

(b) If the scar is large, a chronic parietal aneurysm of the heart exists—the rule in the majority of cases. This is the stage preceding rupture.

Le Count⁽¹⁴⁾ has analyzed the autopsy findings of sixty cases of death from difficulties with the circulation of blood in the coronary circulation, or from lesions generally regarded as caused by such difficulty; thirty-four deaths from fibrous myocarditis with sclerosis of the coronary arteries, and twenty-six of more or less acute occlusion. In several of the second group, acute outpouching of varying degree was present; in many, mural thrombi had formed on the necrotic lining. Small delicate deposits of fibrin on or in the epicardium of the place infarcted were common.

It has long been known to pathologists that there was a constant association between chronic parietal aneurysm and pericarditis. The remarkable part is that it has been so seldom observed clinically.

The detection of pericarditis clinically, after an attack of stenocardia would seem therefore to be an important symptom of myomalacia of the heart of varying degree, the result of infarction following coronary occlusion. The only other type of non-infectious pericarditis which might cause confusion is that rare type seen in certain cases of syphilitic pericarditis, and in connection with chronic nephritis.

SUMMARY AND CONCLUSIONS.

1. The symptom-complex of stenocardia, fever, pericarditis, and varying grades of myocardial insufficiency, for which Sternberg has proposed the name Pericarditis Epistenocardica, is a clearly defined syndrome.

2. The personal observation of this clinical picture in six instances within a few years, the discovery of similar cases in the literature, and the pathological fact that fibrinous pericarditis is not an uncommon post-mortem finding in coronary thrombosis, suggest strongly that Pericarditis Epistenocardica has probably been frequently overlooked in the past.

3. Pericardial friction is the most important and characteristic single sign of the syndrome. The difficulty in detecting the friction rub, because of its light quality, its sharply defined localization, and its transitory or recurrent character is to be especially emphasized.

4. The knowledge of this syndrome makes possible the diagnosis of coronary thrombosis during life in a certain number of cases, and may even lead to a tentative diagnosis of aneurysm of the heart in certain instances.

BIBLIOGRAPHY.

1. LEYDEN, E. Ueber die Sclerose der Coronararterien und die davon abhängigen Krankheitszustände.
Zeitschrift für klinische Medizin, 1884, VII, 459.
2. KERNIG, W. Sitzung des Vereins der Petersburger Aertze March 31, 1892.
St. Petersburger medizinische Wochenschrift, 1892, XVII, 177. (Neue Folge. Bd. IX.)
3. KERNIG, W. Ueber objectiv nachweisbare Veränderungen am Herzen, namentlich auch über Pericarditis nach Aufallen von Angina Pectoris.
Berliner klinische Wochenschrift, 1905, XLII, 10.
4. PAWINSKI, J. Ueber den Einfluss der trockenen Pericarditis auf die Entstehung der Stenocardie und Cardialasthma.
Deutsches Archiv für klinische Medizin, 1897, LVIII, 565.
5. BRAMWELL, B. Diseases of the Heart and Thoracic Aorta.
D. Appleton & Co., New York, 1884, p. 310.
6. BIEGANSKI, W. Stenocardia, angina pectoris.
Medycyna Warszawa, 1894, XXII, 275. (Cited by Pawinski.)
7. HUCHARD, H. Traité clinique des maladies du coeur de l'aorte.
Tome II, Paris, 1899, p. 128.
8. STERNBERG, M. Pericarditis Epistenocardica.
Wiener medizinische Wochenschrift, 1910, LX, 14.
9. HERRICK, J. B. Clinical Features of Sudden Obstruction of the Coronary Arteries.
Journal of the American Medical Association, 1912, LIX, 2015.
10. HERRICK, J. B. Thrombosis of the Coronary Arteries.
Journal of the American Medical Association, 1919, LXXII, 387.
11. HERRICK, J. B., and NUZUM, F. R.
Journal of the American Medical Association, 1918, LXX, 67.
12. LIBMAN, E. Some Observations on Thrombosis of the Coronary Artery.
Medical Record, New York, 1919, XCVI, 521.
13. COHNHEIM und SCHULTHESS-RECHBERG. Ueber die Folgen der Kranzarterien verschliessung für das Herz.
Virchow's Archiv für pathologische Anatomie, 1881, LXXXV, 503.
14. LE COUNT, E. R. Pathology of Angina Pectoris.
Journal of the American Medical Association, 1918, LXX, 974.

Editorial

"Good morning, sir," said his lordship, stepping forward in the most urbane manner, and stopping the doctor, with a high-bred resolution impossible to resist, "I greatly fear you find no improvement in the symptoms to-day?"

"I find decided improvement," answered Mr. Dawson.

"You still persist in your lowering treatment of this case of fever?" continued his lordship.

"I persist in the treatment which is justified by my professional experience," said Mr. Dawson.

"Permit me to put one question to you on the vast subject of professional experience," observed the Count. "I presume to offer no more advice—I only presume to make an inquiry. You live at some distance, sir, from the gigantic centres of scientific activity—London and Paris. Have you ever heard of the wasting effects of fever being reasonably and intelligibly repaired by fortifying the exhausted patient with brandy, wine, ammonia, and quinine? Has that new heresy of the highest medical authorities ever reached your ears—Yes or No?"

"When a professional man puts that question to me I shall be glad to answer him," said the doctor, opening the door to go out. "You are not a professional man, and I beg to decline answering *you*."

WILKIE COLLINS

The Woman in White.



**Alumni
Day,
1920**

There is good reason to anticipate an unusually demonstrative reunion on June fifteenth. Our warriors, returning from the trials and dangers of service, with well-earned laurels, will have natural inclination to pay their tribute of affection and respect to Alma Mater, to exchange views and experiences with one another, and, possibly, to gratify curiosity as to how the old school has weathered the storm. It is safe to predict that in no respect will there be disappointment. A cordial welcome will be found, an exceptionally glorious record of personal achievement in the war, and a promise of progress and greater achievement in the future of the institution. It will not do now to anticipate too

definitely the revelations of the day—it is only proper to say there will be some.

The essential change in the conduct of alumni day during recent years has arisen from the arrangement of commencement as a separate function. Alumni Day is now an uninterrupted program of alumni activities, and the Executive Committee assumes the duty of providing entertainment from the arrival in the morning until departure at night. An outline of the day is offered in President Salmon's witty appeal, the details to be announced in a later circular which will be mailed to every graduate.

To the Alumni:

This is the year we have been waiting for ever since we hurried home from the graduation exercises and hid our diplomas under the pillow so that Dr. Tucker wouldn't come and take them back again when he discovered his mistake. The war is over except in Bolshevikia and the Senate. The last M. R. C. man who wanted them has secured his discharge and his sixty dollars. His colleague who did extra work to let him go has got rested up at last. Collections haven't been so bad, even if the dollar will only buy as much as nineteen cents of real money used to. The income tax returns have been in two months and no Secret Service man has yet appeared to drag us from our homes and firesides. The new car is running fine and the knock in the old one has been ascertained positively to be due to a purely functional disorder. The "missus" needs a rest after a winter spent in waiting on the fireless cooker, the ragless dishwasher and the wringless laundry machine that our thoughtfulness provided to lighten the toil of a servantless home. If you bring her with you or come away without her, she will get a rest in any case.

A RIGHT AND A PRIVILEGE.—When will there come a better time to join up with the old boys and give the once-over and a welcome to the new ones who some day are going to fill our shoes? After all, that scrap of paper that hangs in the waiting room means something more than a legal right to compete on even terms with chiropractors, x-scientists, osteopaths and the ouija board. It means that we belong to a college and that a college belongs to us. Is there anything else that belongs to us or that we belong to—even that pecan orchard in Mississippi or the gold mine in Arizona that we bought the year after old Gotrox had pneumonia—that we fail to visit once in a while? Don't let us put it off until next year. We may all be working for a Workmen's Compensation Board or a Soviet that pays us \$10 a month and found, with one day off in five years. A lot of other things may happen

even to mention which is highly inappropriate in a communication designed to bear glad tidings. Let us loosen up—not on money, for we don't do anything else these days, but on *time*—and give one day to human companionship, the joy of living, the bitter-sweet of reminiscence and the school that we made famous.

THE COMMITTEE HAS DONE ITS PART.—The details of the program will be made known later. Last winter, while you were amusing yourself driving around in the crisp, invigorating air and wondering under which particular snow bank Mike Ostrowski's wife was having her baby, the Executive and Entertainment Committee were slaving over these details. Night after night, long after you had disconnected the telephone and were lying under your eider-down quilt listening to the pipes freeze in the bath-room, they were piloting the frail bark "Menu" between the jagged rocks that bestrew the channel of H. C. L. They produced a perfect meal at the cost of one office consultation, two vaccinations and one birth certificate, and thus entirely justified the rare knowledge of human nature that you showed a year ago when you picked them for their responsible positions.

COMMENCEMENT DAY WILL BE WORTH WHILE.—Commencement is on Monday, June fourteenth, at Schenectady. On that day our ranks will be increased by twenty-one new physicians of the new school and our treasury enriched by twenty-one dollars in the initiation dues which are separated so easily from their donors the first time it is done and with such infinite pains ever afterward. If we can be present at the festivities at Schenectady, we will be made to feel that they couldn't have been held without us.

BUT THE REAL DAY IS TUESDAY, JUNE FIFTEENTH.—Every minute of that day belongs to the alumni. In the morning we will meet old friends informally at the College, hold our class reunions, listen to the inspiring (though self-written) biographies of the members of the decennial anniversary classes and transact the momentous business of the Association. Then we will have luncheon at the Country Club, transportation being furnished through the generosity of the citizens of Albany who have placed a vast fleet of motor cars at the disposal of the Entertainment Committee.

RECREATION, PHYSICAL AND INTELLECTUAL.—After luncheon, diversions will be supplied varied enough to suit all degrees of mentality, age, girth, habits, likes, dislikes, whims, and prejudices. High-brows will be given an opportunity to go to the wards of the Albany Hospital where special informal clinics will be held in every medical specialty except fours-right and fours-left. We shall there have a chance to listen to views of great leaders of medicine and surgery and go away still holding the opinion as to what really ails the patient that we form when we first lay eyes on him. Low-brows can remain at the club and listen to the stories which other great leaders of medicine and surgery brought back with them

from the A. E. F. Golf will be available for those who prefer it and there will be rocking chairs on the shaded club porch for the high blood-pressure brigade. Automobile trips to near and distant points of interest will be provided for those who are only really happy when burning gasoline and rolling up mileage. If anyone desires none of these diversions designed to while away the hours between luncheon and dinner, he has only to breathe his slightest wish into the ear of one of the Entertainment Committee and it will be instantly granted—with one single exception involving questions of Constitutional amendment, legislative enactment and law enforcement, the discussion of which is out of place in a communication of this kind.

THE DINNER.—Then, as the sun sinks slowly through the clear June air to rest behind the West Albany car barns, will come the supreme hour of the day. At half past seven, precisely, the dinner will be served, a simple repast of wholesome food and a rich feast of wholesome intellectual enjoyment. Distinguished speakers from far and near will throw the light of their wisdom and experience upon questions that interest us as men of the world as well as doctors. Arrangements will be made for classes or other groups who desire it to sit together. Dress may vary from that dictated by the latest edicts from centers of fashion to that dictated by the necessity of abandoning the task of filling grease cups in nick of time to catch the 3:33 to Albany.

YOUR PART.—To make this Alumni Day the best ever had, it is necessary for *you* to do just four things:

I. Plan Now to Come. Accept no engagements, not even for marriage or any of its subsequent casualties, for the week in which falls Tuesday, June fifteenth.

II. Bring Another Alumnus. Write *today* to the three men whom you knew the best in the best class that was ever graduated from the Albany Medical College and ask them to come too. What if they are ageing faster than you are, won't it liven them up to see how a real man carries his years?

III. Notify the Secretary on the Slip Found Herein. The Secretary has a presentment that you are coming but more than presentments are demanded by the stewards of the Club and Hotel.

IV. Send One Dollar in any Form of Legal Tender to the Secretary for Your Annual Dues. A young man of powerful physique and nerves of steel holds this position and he wouldn't show a tremor if some one paid him two years in advance or for sixty days in arrears.

IN CONCLUSION.—For one day put the cares of a doctor's life entirely aside. Give up money-grubbing—the H. C. L. and the income tax collector will get it anyway in the end. Close your desk, lock the office door and devote twenty-four hours to strengthening the ties that bind you to a set of human beings who, for three or four years, meant more to you than all the rest of the world. Then, when the last distinguished

speaker at the dinner has completed his last "lastly," we will go back refreshed to our hospital ward, our laboratory or to the dusty, tree-bordered ribbon of road that endlessly unwinds before the country doctor. We shall have spent one day and a few dollars that are rapidly decreasing in their purchasing power. In our minds will be some new ideas and some re-awakened memories. In our hearts will be a warmer place for the small but sturdy college that has survived long enough to send out her sons to one war, in which they had to fight unknown diseases almost weaponless and to another war, in which they were armed, as they are for the daily battles at the bedside, with the best weapons that scientific medicine and surgery can forge anywhere.

THOMAS W. SALMON, '99, *President.*

CLINTON B. HAWN, '06, *Corresponding Secretary.*

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

DEATHS FOR MONTH OF FEBRUARY, 1920.

Consumption	24	Bright's Disease	13
Typhoid Fever	0	Apoplexy	13
Scarlet Fever	1	Cancer	11
Whooping Cough	0	Accidents and Violence....	4
Measles	0	Deaths under 1 year.....	13
Diarrheal Diseases	4	Deaths over 70 years.....	56
Pneumonia	24	Death rate	26.04
Broncho Pneumonia	22	Death rate less non-residents	23.85
Influenza	44		

Deaths in Institutions.

	Non-res.	Res.		Non-res.	Res.
Albany Hospital	2	14	Maternity Hospital	0	4
Albany Hospital T. S... ..	2	2	Public Places	2	0
Albany Co. Hospital....	0	3	St. Margaret's House... ..	0	1
Child's Hospital	0	1	St. Peter's Hospital....	4	15
Federation of Labor					
Camp	1	0		15	51
Home for Aged.....	0	2			
Homeopathic Hospital .	3	8	Births		193
Hospital for Incurables.	1	1	Still births		6

DIVISION OF COMMUNICABLE DISEASES.

Typhoid Fever	1	Whooping-cough	15
Scarlet Fever	52	Tuberculosis	25
Diphtheria and Croup.....	11	Mumps	33
Chickenpox	19	Pneumonia	185
Smallpox	0	Influenza	2,004
Measles	7	Septic Sore Throat.....	2
German Measles	1		

Total 2,355

Number of days quarantine for scarlet fever:

Longest..... 30 Shortest..... 30 Average..... 30

Number of days quarantine for diphtheria:

Longest..... 32 Shortest..... 25 Average..... 26 1/5

Fumigations:

Rooms..... 360 Buildings..... 60

Milk bottles disinfected..... 423

Communicable Diseases in Relation to Schools.

	Reported D. S. F. M.
Public School No. 4.....	2 ..
Public School No. 1.....	4 ..
Public School No. 11.....	1 ..
Public School No. 12.....	4 ..
Public School No. 16.....	2 ..
Public School No. 21.....	1 ..
Public School No. 22.....	2 ..
Public School No. 24.....	2 ..
Kenwood School	1 ..
St. Joseph's Academy.....	2 ..
St. Patrick's Institute.....	1 ..
Lady of Angels School.....	1 ..
St. John's School	2 ..
St. Ann's School.....	1 ..
St. Mary's School.....	1 ..
St. Casimir's School.....	2 ..

MISCELLANEOUS.

Cards posted for communi- cable disease	70	Vaccination dressings	8
Cards removed	32	Children examined for em- ployment certificates	13
Notices served on schools..	140	Number of employment cer- tificates issued	13
Notices served on stores and factories	29	Taking specimens of blood for Wassermanns	0
Postal card returns sent to doctors	70	Taking smears for Gonococci	0
Postal card returns received from doctors	32	Miscellaneous investigations by Seventh District Phy- sician	1
Inspections and reinspections	85		
Vaccinations	3		

NURSE'S REPORT.
Tuberculosis.

Living cases on record February 1, 1920.....		870
Cases reported:		
By card	16	
Dead cases by certificate.....	9	25
		<hr/>
		895
Dead cases previously reported.....	15	
Dead cases not previously reported.....	9	
Removed	34	
Died out of town.....	0	
Recovered	0	
Unaccounted for	0	58
		<hr/>
Living cases on record March 1, 1920.....		837
Total tuberculosis death certificates.....		24
Non-resident deaths:		
Albany Hospital Camp.....	2	
C. F. L. Pavilion.....	0	
County Hospital	0	
St. Margaret's House.....	0	
City at large.....	1	
Albany Hospital	1	4
		<hr/>
Resident deaths		20
Visits to cases of tuberculosis.....		49
Miscellaneous visits		29
Visits to physicians.....		10

LABORATORY REPORT.

Diphtheria.

Initial Positive	18	Unsatisfactory	9
Initial Negative	254		
Release Positive	26	Total	381
Release Negative	74		

Sputum for Tuberculosis.

Positive	39	Unsatisfactory	0
Negative	145		
		Total	184

Widals.

Positive	1	Unsatisfactory	1
Negative	12		
		Total	14

Meningococcus.

Positive	0	Negative	0
			<hr/>
Total			0
Wassermann tests (positive 39)	248	Gonorrhoea (positive 6)	61
Milk Analyses	26	Miscellaneous examinations.	11
Water Analyses	0		
Pathological Examinations..	0	Total examinations	<hr/> 925

HEALTH PHYSICIAN'S REPORT.

Cases assigned	80	Calls made	193
----------------------	----	------------------	-----

DIVISION OF SANITATION.

Complaints	38	Reinspections	21
Inspections	33	Plumbing	15
Plumbing	19	Sanitary	6
Sanitary	14		

HEARINGS.

Hearings	1	Cases heard	1
----------------	---	-------------------	---

Class of Cases.

Water	1
-------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	99	Houses tested	15
Old Houses	29	Smoke	0
New Houses	70	Blue or red.....	0
Permits issued	25	Peppermint	2
Plumbing	21	Water test	13
Building	4	Houses examined	20
Plans submitted	7	Re-examined	68
Old buildings	5	Valid	10
New buildings	2	Without cause	10
		Violations	0

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	17	Cats removed	44
Dogs removed	47		
			<hr/>
Total			108

DIVISION OF MARKETS AND MILK.

Public market inspections...	15	Milk cans inspected.....	342
Market inspections	72	Milk cans condemned.....	0
Fish market inspections.....	9	Lactometer readings	22
Fish peddler inspections.....	0	Temperature readings	22
Slaughter house inspections..	0	Fat tests	43
Rendering establishment in- spections	1	Sediment tests	0
Pork packing house inspec- tions	4	Chemical tests	0
Hide house inspections.....	0	Cows examined	0
Milk depots inspected.....	17	Cows quarantined	0
Stores inspected	122	Cows removed	0
Dairies inspected	0	Complaints investigated	3
		Milk condemned	40 qts.
		Bob veal condemned.....	200 lbs.

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—SUPERINTENDENT'S REPORT FOR THE YEAR.—Four new departments have been added. The Hospital Social Service and Venereal Disease, started in the spring, have more than proved their value. The last two, the New Special Obstetrical and Industrial Departments, although in existence but a short time, are beginning to show results.

The fact that every department has grown is encouraging.

The nursing cases have increased fourteen per cent over last year; the prenatal, thirty-three per cent. The increase in the Metropolitan work since 1917 is almost fifty per cent. The Dispensary work has grown greatly, 1,709 more patients treated this year than last.

The fact that for some time past we have not had a physician to conduct our tuberculosis clinics has been a great drawback. However, we have had sixty more patients under our care this year than last.

Our student department has proven a great success. Forty senior pupil nurses have been given a course in public health nursing.

A survey of 500 of the past epidemic cases was made in the early part of the year and a report made to the State.

The question frequently arises: just what does the Guild do and what is Public Health Nursing?

Public Health Nursing is any form of nursing care, supervision or instruction a nurse can give that tends to prevent, lessen or cure disease. We sum it up under two headings—Preventive and Curative. Under Preventive care we place prenatal care and the social calls made after the mother is up: general supervision of the family; tuberculosis nursing, instruction and supervision; the care of open air school children in the home; dispensary treatment and social service; hospital social

service; venereal clinics and social work; industrial clinics and follow up work;—under Curative, dispensary care and bedside nursing.

It often happens that in one family there may be need of all these branches of Public Health Nursing. In that case, the nurse who has charge of that district is able to care for all needs.

The nurse often finds families where illness occurs, in financial or other distress. By co-operating with the relief agencies of the city, these needs are met and the family restored to normal conditions again.

Number of new cases this year.....	3,472
Total number carried.....	4,128
Total number of nurses' visits.....	22,759

Of these cases 972 held Industrial Policies in the Metropolitan Life Insurance Company, and were cared for by us according to our contract with the Metropolitan.

The State Department of Health has given us the benefit of their vast knowledge and experience, particularly in establishing and carrying on the new venereal department.

As always, the City Health and Charities Department have been ready with help when needed.

The Central Mothers Christian Union, through the South End Welfare Station, has been of the greatest help in training the pupil nurses.

Every nurse on the staff has given her best towards the broadening out and building up of our standards and to their loyal endeavors I attribute our growth.

F. R. FREEMAN, *Superintendent.*

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—STATISTICS FOR FEBRUARY, 1920.—Number of new cases this month, 927; classified economically, free, bed cases, 132; prenatal, 23; dispensary social service, 0; positive tuberculosis, 14; dispensary tuberculosis, 3; hospital social service, 23; venereal, 7; paid: limited means, 140; Metropolitan, 251; industrial, 334; cases carried over from last month, 1,121; nursing cases, 143; prenatal cases, 65; dispensary social service, 19; tuberculosis supervision including dispensary, 227; hospital social service, 183; venereal, 84; tuberculosis positive, 400; total carried, 1,121; total cases carried during month, 2,048. Division of nursing cases: Medical, 424; surgical, 34; obstetrical, 53; prenatal, 23; maternity, 7; confinements, 35; miscarriages, 2; babies, 41.

Visits for nurses (all departments, 2,510).—For nursing care, 2,125; prenatal instruction, 35; tuberculosis supervision and instruction, 17; venereal diseases supervision and instruction, 133; hospital social service, 0; general social service including dispensary, 77; supervision, 46; for other purposes, 77.

Source of nursing cases: Metropolitan agents, 194; doctors, 88; nurses, 44; dispensary, 13; family or friends, 170; other sources, 43. Disposition

of nursing cases: Discharged recovered, 35; improved, 431; unimproved, 47; dead, 16; to other care, 24; carried, 143. Disposition of other cases: Prenatal, to maternity and other care, 42; carried, 46; dispensary social service, to dispensary care, 11; carried, 8; hospital social service, discharged, 0; carried, 206. (Work discontinued on account of epidemic.) Venereal, discharged, 5; carried under care, 37; supervision, 49; total, 86; carried under care at House of Good Shepherd, 24; tuberculosis, discharged dead, 13; carried, 679; industrial, work started this month, 328 names on file. Number of cases carried over into March, 1,520. Nursing, 143; prenatal, 46; dispensary social service, 8; hospital social service, 206; venereal, 110; tuberculosis, 679; industrial, 328; total cases carried, including industrial, 1,520. Number of clinics, 102; surgical, 13; medical, 9; gynecological, 5; prenatal, 5; eye and ear, 18; number new patients, 97; nose and throat, 8; skin, 2; children, 5; lung, 0; number old patients, 686; children's lung, 4; venereal, 11; nerve, 2; clinics with doctor attending, 82; clinics without doctor attending, 20; total number patients treated, 783.

THE PLACE OF MENTAL HYGIENE IN SOCIAL WORK.—The following course of lectures known as "The Kennedy Lectures, 1920," has been given by Dr. Thomas W. Salmon, medical director, National Committee for Mental Hygiene:

1. The Field of Mental Hygiene. Practical aims of mental hygiene. Prevention of mental diseases only relatively small part of whole task. Slow growth of popular confidence in any scientific intervention in practical affairs. Special distrust of academic psychology as a practical guide, even in education. Change when laboratory studies of intellect were replaced by observations of man's actual activities conducted in their social environment. Origin and growth of social psychology, psychometric psychology and psychiatry. Importance of feeling compared with intellect in actual conduct of human relations. Key to understanding of complex social and personal situations. Disadvantages of descriptive method in study of emotions. Advantages of analytical method. Necessity of being familiar with nature and processes of mental adaptation to work in broader fields of mental hygiene.

2. Mental Adaptation: Principles. "Adapt or perish" rule of life. Dependence of social adaptation upon personal adaptation and of personal adaptation upon mental factors. Importance of mental adaptation in personal life. Intellectual level fixes sphere in which activities are conducted, but not their scope or nature. Basic conceptions of newer psychology. Conflict between instinctive trends and social requirements. Dissociation. Complexes. Rationalization. Repression and suppression. Compensatory activities. Relation of mental factors to freedom and usefulness of life. Possibility of making constructive use of these conceptions. Field for application of positive side of mental hygiene.

3. Mental Adaptation: Applications. Prevention of mental diseases and mental deficiency. Prevention of the psycho-neuroses. Greater importance of phases of mental hygiene not directly concerned with prevention of disease. Increase of the vigor and usefulness of life as much an aim of hygiene as the prevention of disease. The psychoses and psycho-neuroses as protective mechanisms. Place in the world for the poorly adapted. Importance of insight. Obstacles to frankness in matters of feeling similar to that toward natural sciences. Desirability of scientific attitude toward social and individual phenomena of mental life. Problems of crime and delinquency. The family.

4. Some Lessons from the War. The war as an experiment in human adaptation. Sorting of human material for special tasks and selected stresses. Slight influence of war experience on psychoses. Possible explanations. Dealing with the war neuroses a vast practical demonstration in mental hygiene. The problem. Difficulties and early misconceptions. Attacking a complex problem with program based upon scientific conceptions of the new psychology. Methods. Results. Application to similar problems in civil life. Wide prevalence of psycho-neuroses. Their social significance, especially in childhood. Methods of prevention available in civil life. Effects of success upon certain unrelated fields of social work.

5. Mental Hygiene Phases of Social Work. Medical work in mental hygiene—"applied psychiatry." Non-medical work—"applied psychology." The psychiatric social worker. The mental hygiene nurse. Questions of training and experience. Mental hygiene organizations. Relation to general health organizations. The place of mental hygiene in other social organizations. The mental hygiene of the social worker.

6. Problems of the Future. Problems for research. Present trends in psychological medicine. Will mental hygiene be able to follow if these trends are developed? Possible specialization in mental hygiene. The limitations of science in social activities. Dangers of indefinite extension of aiding in adjustment in personal life—to society; to the individual. What may be gained and what may have to be given up in a social order based upon scientific application of knowledge of mechanisms of the emotions.

THE TWENTY-EIGHTH ANNUAL MEETING OF THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.—The twenty-eighth annual meeting of the Association of Military Surgeons of the United States will be held at New Orleans, La., April 22nd to 24th, with headquarters at the Hotel Grunewald.

Three sessions daily will be held and at these addresses will be made on pertinent topics by members of the association and discussed at the meetings. In spite of the name of the association, the topics dealt with do not confine themselves absolutely to the field of military surgery.

That this is so is easily understood as the fact of a man's being in the service does not divorce him from the ordinary problems of the practice of medicine. This meeting occurs immediately prior to that of the American Medical Association whose meeting begins on the 26th and it is hoped that many of those who expect to attend the latter meeting may arrange their plans so as to take in our meeting as well.

It is desired to invite attention to a fact which is not generally understood by medical men of the country and that is that practitioners in medicine are welcome at any of the sessions of the association even though they be not members themselves. It is the desire of the association to have the medical profession of the country conversant with the work which is being done by the Association of Military Surgeons and we feel that in this way they may very readily become acquainted with it.

Any further information relative to this meeting may be obtained by addressing the Secretary, Army Medical Museum, Washington, D. C.

AMERICAN PROCTOLOGIC SOCIETY.—The twenty-first annual meeting is to be held at Memphis, Tenn., on April 22 and 23, 1920. The members are to be the guests of Dr. John L. Jelks and of the Memphis and Shelby County Medical Society.

The scientific program is as follows: Annual presidential address on "Co-operation and Co-ordination," will be read by Dr. Collier F. Martin, Philadelphia Pa. The following papers are announced: "Post-operative Treatment of Fistula with Special Reference to the use of Gutta-Percha Tissue," Dr. Alfred J. Zobel, San Francisco, Cal.; "Some Aids in the Record Keeping of Ano-rectal Cases," Dr. Ralph W. Jackson, Fall River, Mass.; "Standardization of Hemorrhoid Operations," Dr. Louis J. Hirschman, Detroit, Mich.; "Personal Experience in the Treatment of Internal Hemorrhoids," Dr. Alois B. Graham, Indianapolis, Ind.; "A Virulent Infection of the Colon by the Colon Bacillus," Dr. Jerome M. Lynch, New York, N. Y.; "Pleuro-colonic Fistula," Dr. Frank C. Yeomans, New York, N. Y.; "Reflexes Due to Rectal Diseases," Dr. William M. Beach, Pittsburgh, Pa.; "Pre-operative Treatment in Rectal Surgery," Dr. William H. Stauffer, St. Louis, Mo.; "Local Pain and Other Symptoms Associated with Infections of the Anal Tissues," Dr. Granville S. Hanes, Louisville, Ky.; "The Recto-vaginal Septum in Proctology," Dr. Descum C. McKenney, Buffalo, N. Y.; "Disabilities Due to Intestinal and Rectal Diseases in the Young Soldier," Dr. William H. Axtell, Washington, D. C.

The officers of the society are: President, Dr. Collier F. Martin, Philadelphia, Pa.; vice-president, Dr. J. Coles Brick, Philadelphia, Pa.; secretary-treasurer, Dr. Ralph W. Jackson, Fall River, Mass.; executive council, Dr. Jerome M. Lynch, New York, N. Y., Dr. Collier F. Martin, Philadelphia, Pa., Dr. Dwight H. Murray, Syracuse, N. Y., and Dr. Ralph W. Jackson, Fall River, Mass.

In Memoriam

MICHAEL J. LAWLER, M. D.

Dr. M. J. LAWLER died at his home in Carthage after an illness of two weeks from pneumonia, on March 14, 1920, aged 52. Dr. Lawler was born in Altmar, the son of the late James and Catherine Lawler. He spent his early life in his native town, attending the academy at Pulaski from which he was graduated. He entered the Albany Medical College and was graduated in 1890. He then returned to Altmar where he practiced medicine for a year after which he went to Smithville where he remained until he went to Carthage in 1902. In 1897 he married Miss Ida May Hamm. He leaves his wife; two brothers, James of Altmar, and Timothy of Pulaski; a sister, Mrs. Mary Caraher of Altmar; an adopted daughter, Mrs. L. O. Gates of Watertown, six nephews and a niece.

NEW YORK STATE MEDICAL LIBRARY

Edited by Frances K. Ray

RECENT ACCESSIONS.

- Besredka, A. Anaphylaxis and anti-anaphylaxis. 1919.
 Bishop, E. S. Narcotic drug problem. 1919.
 Brubacker, A. P. Textbook of human physiology. 6th ed. 1919.
 Contributions to medical and biological research dedicated to Sir William Osler, in honor of his 70th birthday. 2 v. 1919.
 Crile, G. W. and Lower, W. E. Surgical shock. 2d ed. 1920.
 Dercum, F. X. Clinical manual of mental diseases. 2d ed. 1918.
 Flack, Martin and Hill, Leonard. Textbook of physiology. 1919.
 Foote, J. A. Essentials of materia medica and therapeutics. 3d ed. 1918. (Lippincott's nursing manuals.)
 Ghon, Anton. Primary lung focus of tuberculosis in children. 1916.
 Harrower, H. R. Practical organotherapy. 1920.
 Hirschman, L. J. Handbook of diseases of the rectum. 3d ed. 1920.
 Lagrange, Felix. Atlas d'ophtalmoscopie de guerre. 1918.
 Lynch, J. M. Diseases of the rectum and colon. 1914.
 Metcalf, W. B. Tuberculosis of the lymphatic system. 1919.
 Nightingale, Florence. Florence Nightingale to her nurses; a selection from Miss Nightingale's addresses to probationers and nurses of the St. Thomas hospital. 1914.
 Park, W. H. and Williams, A. W. Pathogenic microorganisms. 7th ed. 1920.
 Saleeby, C. W. The whole armour of man. 1919.
 Southard, E. E. and Solomon, H. C. Neurosyphilis, modern systematic diagnosis and treatment. 1917.

ALBANY MEDICAL ANNALS

Original Communications

MENTAL HYGIENE.

Lecture delivered in the Post-Graduate Course in Infectious Diseases and Public Health for Physicians and Health Officers at the Albany Medical College, May 29, 1918.

By JOSEPH E. CLARK, M. D.,

Sanitary Supervisor, State Department of Health

Mental ailment as a health problem is being recognized by public health officials to such an extent at the present time that activities in reference to research, care, treatment and prevention, even the reporting of certain types, is of much significance.

In a recent report by the United States Public Health Service it appears quite a comprehensive program, involving co-operation not only on the part of federal agencies but also state and local as well, has been carefully outlined, with expectation of development when necessary funds are available.

Among the various details noted are provision for the training of medical officers and nurses in mental hygiene and attendant duties as the case may be: consideration of educational methods in reference to the mental health and status of children; promotion of psychiatric pavilions for the observation and treatment of incipient cases; establishment of surveys as to the prevalence of mental disorders, alcoholism and epilepsy; research relative to the mental state of prostitutes, likewise venereal disease with respect to psychopathic conditions.

In view of the general increase of nervous affections incidental in part to stress of modern life, but to an alarming extent, indeed, to vicious habits, alcoholism or syphilis, the co-operation of the federal authorities is not only timely yet necessary, particularly in respect to post war conditions; and, with the agencies already in action, a great and powerful factor will be added to stimulate and cope with requirements.

To become an expert mental hygienist a thorough training is necessary and thus, other than those specializing in mental and nervous disorders, the medical practitioner is rather at disadvantage and likely to overlook conditions and symptoms which the more experienced observer would recognize. Notwithstanding, the general physician, in the main, is so well informed that mental ill health, potentially or incipency, is noted sufficiently early for appropriate care and treatment to be of avail in many instances.

With the child having the heritage of good health, both nervously and physically, as well as the offspring not so fortunate, much in the matter of future nervous and mental stability depends upon the knowledge, wisdom and judgment of its parents in rearing children, likewise environment, in numerous instances; and, moreover, the family physician oftentimes can be of utmost service by proffering requisite aid and advice, prior as well as after birth. Thus after due consideration of the necessity of proper physical development there is need also of especial attention, from infancy to childhood, puberty to mid-adolescence, in respect to the formative mind and nervous system, that the latter be not overtaxed nor poisoned and the former wholesomely trained and disciplined. However attainment of such desideratum to a large extent must be mainly through public sources of information, revision of educational procedures and co-operation of the medical profession. The training and disposition of morons, delinquents and other grades of defectives, apart from the foregoing, should be governed largely by those specially qualified to advise. And the same in a degree may be said in reference to cretins and other forms of abnormal development due to perverted functioning of certain of the endocrinal glands.

Mental instability may be due to acquired or inherited causes or both, with syphilis, alcoholism, drug addiction, mal-nutrition, tuberculosis, vicious traits and habits being important predisposing factors as the case may be. Thus in infancy or during the prenatal period it oftentimes is within the province of the physician to direct treatment which will be preventive of some future mental or nervous ailment such as juvenile paresis or tabes. Or it may be narcotism or alcoholism. And with the young child, during the period of dentition, a series of convulsive seizures are of sufficient warning for the adoption of measures towards the prevention of a beginning epilepsy. While in frequent instances the due consideration and removal of adenoid vegetations, also hypertrophied tonsils, not only safeguards against mental impairment and nervousness but likewise retarded physical development. And so too in reference to the malfunctioning of the eyes, unless early recognized and promptly and efficiently corrected not only are various nervous disorders such as hysteria, epilepsy and chorea possible according to many observers but even insanity, at times, in the opinion of Hansell, writing upon this subject in Posey and Spiller—Text on the Eye and Nervous System.

The children of to-day to an extensive degree suffer from the want of pure, fresh air; the necessary quietude for rest and sleep of a refreshing character; insufficient food and clothing of either wholesome quality or proper, easy fit. Imperfect elimination and regularity. Laxity of discipline of the type necessary for fit moral and mental balance. And in many ways the foregoing applies to the adult population as well.

The school curricula while arranged for general primary educational purposes and not suitable for backward children of the ordinary retarded development type frequently is too onerous for the bright intellectual child with neuro or psychopathic diathesis. And excepting due consideration is given to lessening the mental strain and establishing longer rest periods the potential neurosis or psychosis may be hastened to a reality.

With greater prevalence the custom of having school medical inspection and school nurses is increasing and with resultant good as a whole yet, for the most part, other than with the apparent

defective and delinquent, comparatively little if anything has been done in the way of mental hygiene and especially safeguarding so far as feasible nervous and neurotic children from the fears, anxieties and fatigue incidental to school conditions and requirements. Dr. Sidis as well as other psychologists affirms functional neuroses and psychoses are obsessions of the fear instinct whether conscious or subconscious, with hereditary beginning more or less evident in either one or both of parents of the individual affected. Care then is necessary both at home and at school in instances of the neurotic child to avoid mental tire and fear in any of the various forms or psychological complexities, and in event of such happening effort ought to be made not only to disabuse the mind but also such other measures adopted as necessary for mental rest and safety.

Hysteria and epilepsy are frequently met with in school children as well as those of adult age and early recognition and treatment is extremely essential. Heredity plays an important rôle in each instance although perhaps more so with hysteria than epilepsy. With the hysterical child therefore training and disciplining of the mind is very necessary from the outset but always with due circumspection, and while the endeavor should be to develop the attention to steadfastness, carefully discouraging inattention, slovenliness of thought and action, still oversustained application particularly after mental fatigue, partaking of meals, and muscular exertion is to be deprecated. Short hours of work, wholesome food, sleep, with judicious mental discipline are prerequisite for this type of neurotic.

The epileptic age may be said to be between five and fifteen years although cases occur before and after this period, instances of idiopathic type having been reported as late as sixty years. All manifestations are not of the classic type of symptoms but at times may be so hidden and obscure as to pass unrecognized both at home and at school. As a rule unfortunately school attendance in cases of epilepsy should be discontinued; education, however, may continue with fixed, short hours of study, the endeavor being to have child live as normal a life as possible. Handicraft in some form or other is frequently advisable.

From the foregoing it will be apparent that a person of more

extended experience and training than the average nurse should be in charge of the pupils of the public, parochial or private schools although such is quite commonly the case at present so far as health measures are concerned. And where there are school-medical inspectors, excepting specially trained, provision should be made for the advice of either an appointed mental hygienist or consultation at some nearby mental hygiene clinic, institutions of this character under the auspices of the State Hospitals being now available.

Knox in the *New York Medical Journal* for 1915 states that of the insane in the New York State Hospitals about sixty per cent. revealed an hereditary history, and in the instances of dementia praecox about fifty-nine and one-half per cent of cases had similar predisposition. Burr in same journal states practically all cases of dementia praecox give a history of hereditary unbalance or moron ancestry. While Sajous claims twenty-five per cent. of this type of insanity as due to thymus insufficiency and quotes the study of L. Pierce Clark and Tyson on the eye in reference to auto-intoxication from glandular insufficiency in corroboration. However, while the cause of this disease is not yet established, some of the most recent work tends to a psychogenic beginning with a loss of balance in the mental metabolism. The onset primarily is during puberty or adolescence but not invariably as hitherto considered. Paton is of the opinion that the majority of cases develop between the twentieth and thirty-eighth years and other competent observers report outbreaks before the fifteenth and as late as the fiftieth year.

With the exception of the arrested or retarded cases the symptom-complexes note the progressive mental deterioration peculiar to this degenerative type of alienation, therefore the grouping into three types; hebephrenic, most frequent according to Gulick; the catatonic; and the paranoiac, latest in age development and longest in onset. By many a fourth type, simple dementia, is recognized although usually classified with the hebephrenic.

The onset of dementia praecox quite often is considered abrupt yet upon investigation a large proportion of cases will be found

to have been slow and insidious in development thus an intimate knowledge of the individual is necessary towards establishing an early diagnosis. Mental isolation, negativism and indifference are the so-called three fundamental markings common to the groups enumerated and for this reason the clinical picture described has been termed polymorphous.

The hebephrenic form is the most frequent and may be long unrecognized as to onset. Headache, insomnia, inability to think and maintain attention, eccentricities, seclusiveness, emotional instability, restlessness, laxity and sexual perversions are to a greater or less degree prodromal symptoms.

The catatonic form is usually subacute as to onset with a condition of mental depression. It may be briefly characterized as a peculiar stuporous state, changing at times to one of excitement; negativism, automatism and muscular tension, etc.

The paranoid form is differentiated by the prominence and persistence of delusions and hallucinations despite mental deterioration. In some ways this type is perhaps more clear cut than other forms of dementia praecox, its onset occurs generally later in life and prognosis the most unfavorable. While the delusions often are phantastic and fleeting still those of grandeur as well as of persecution commonly happen, and varying degrees of motor excitement are likewise observed.

Inasmuch as remissions, retardations and cures are not infrequently reported the propriety of early recognition and treatment of the type of mental deterioration under consideration will be apparent; however, because of the foregoing it should not be forgotten the prognosis as a whole is grave so far as mental health and recovery is concerned. Oftentimes with incipient symptoms noted, with safeguards, environment and efficient treatment, particularly mental, good results likewise cures may be effected, but usually the best recourse is the hospital or private sanitarium.

Concerning the fourth form or simple dementia the beginning and progression is not as distinctive as the others. The defects in intelligence and anomalies of emotion may be very slight, the specific symptoms do not develop, the progress exceedingly slow. In the lower classes these patients frequently are found

as tramps, vagabonds and prostitutes. A certain proportion likewise become habituated to drugs and alcohol. Gradually and after lapse of years the signs of dementia praecox appear and sufficiently manifest to confirm a previous tentative diagnosis at times.

Burr has written that this form of aberration is rapidly increasing in the United States and accounts for same by the marriages of morons to a great extent. How much credence should be given to his assertion, for there are no statistical data to substantiate, is a serious question yet, the thought arises, even if not altogether warranted insofar as the etiology of dementia praecox is concerned, the statement should give rise to measures for greater care and precautions against the marriage of mental deficient whether of high or low degree, and some means of determination of fitness in this respect may well be a problem for the mental hygienists as a preventive effort against race decadence.

The experiments of Hodge several years ago by which was demonstrated the effects of fatigue on the nerve cells of the bee, also those of my own with modifications of milk in the feeding of kittens served to explain in a measure certain acquired mental states particularly neurasthenia. And as oftentimes chronic nervous exhaustion from over-mental strain, insufficient rest, lack of nourishment, excesses, etc., occasions, especially if associated with hereditary nervous instability, borderland psychopathic symptoms alike in many characteristics to incipient melancholia (old classification) it is always well to inquire carefully into the history of an individual presenting symptoms of brain fag besides making a thorough examination prior to outlining treatment or submitting prognosis.

Certain types of neurasthenia while accelerated by overwork, dissipation, loss of sleep, excesses, etc., owe their causation to other than brain cell exhaustion and malnutrition per se. Some instances, especially, may be incidental to syphilitic infection, usually but not invariably, as commonly considered, during the tertiary stage. It is advisable therefore in doubtful and suspicious cases to make use of the laboratory for a Wassermann and if negative follow up with a spinal fluid examination for cell

count, globulin test and goldsol phase. Frequently the latter will be positive while former is negative. Salvarsan or mercurial treatment ought to follow as may be deemed advisable.

In addition also to conditions tending to mental tire, intestinal toxæmia is ascribed by some as occasioning neurasthenia at times.

Syphilis invades the nervous system either by a round cell infiltration and exudation affecting the blood vessels of the meninges or by causing a parenchymatous degeneration of the neurons. Thus the two general types:—exudative and degenerative. And under the first may be classed cerebral and spinal syphilis or their combination, while paresis, locomotor ataxia and other manifestation including epilepsy and optic atrophy come under the second form. Frequently cases exhibit a beginning exudative involvement followed by the degenerative process upon the nerve cells. The usual period for nervous or mental outbreak is about ten years after the primary infection although it may occur within six months or as late as thirty years. And of the luetic it is estimated from two to ten per cent. suffer from some form of nerve involvement. Men are more often affected than women and children are not immune. The predilection of the specific organism for the nervous structure is not known, but by many it is the view that the stress of modern civilization, alcoholism, excesses, heredity are predisposing factors.

Gummata of the brain frequently present mental symptoms besides those of a neoplasm; that is headache, nausea and vomiting, convulsions, cranial nerve palsies, optic neuritis, etc. Starr states they are very rare in childhood and never the result of inherited syphilis. He also adds that gumma of the brain may develop within a year of the infection, and in some instances be the only manifestation apparent of a tertiary manifestation occurring twenty years following the primary lesion. Iodides in these cases are preferable to mercury or salvarsan, and oftentimes rapid improvement is noted under judicious administration. However this statement is not intended to imply the contraindication of salvarsan nor mercury in treatment of gummatous growths only a subordinated relation as it were.

Paresis or General Paralysis as recommended under classification in classification adopted by the American Medico-Psychological Association is by some, notably Mott, considered one of an entity of which tabes and optic atrophy are the others, but this grouping is not altogether accepted.

The onset of general paralysis is not commonly recognized although it may be existent for several years and ushered in as a neurasthenia, the specific causation of which at times has been referred to. And in view of the remissions also cures under modern therapy, besides the necessity of an early diagnosis, that same be affected, likewise the protection of family and community oftentimes from embarrassing and unfortunate complications, there is frequently need on the part of the practitioner not only of more intimate knowledge as to prodromal symptoms but also of the value of serological findings as applied to syphilitic nervous disorders.

Clinically speaking, quoting Dana, paresis is approached in four different ways:

1. Luetic neurasthenia or anxiety psychosis.
2. Luetic melancholia or mania.
3. Meningeal cerebral or spinal syphilis.
4. Gradually or explosively.

An apoplectic form or convulsive attack occurring at forty years or more in an individual for the first time should give rise to the suspicion of syphilis, and with a prior history of change of disposition, eccentricities, headache, insomnia, inability to concentrate attention, impaired memory, slurring speech, tremor of facial muscles, muscular weakness, irregularity in pupils, also loss of light reaction, diminished or exaggerated knee reflexes should with exalted ideas (at times depression instead) cause tentative diagnosis of paresis. A positive colloidal gold reaction, with positive spinal fluid Wassermann, etc., will confirm opinion. The treatment heretofore of mercury and iodides intensively is yet advocated by some while others claim better results with salvarsan. Intraspinal injections of salvarsanized serum or subdural treatment of same have been followed with excellent results under the guidance of some. But

the whole matter in this respect apparently is an early diagnosis, intensive treatment with salvarsan, mercury or salvarsanized serum up to, as close as safe, toxic doses, etc. Keeping in mind that it is useless in the terminal stages to administer any of the foregoing, and, if so, such may hasten rather than retard fatal results.

Manic-depressive psychoses, until recent years following the researches of Kraepelin, classified as mania and melancholia, are without known etiology excepting strong hereditary tendencies, and under strain mental unbalance. Circular insanity by the same authority is considered a mixed or periodic type of manic-depressive psychosis. The prognosis, however, being much more unfavorable on the whole than other manic or depressive forms.

Mania, to use the old term, has three distinctive symptoms which may be more or less marked according to conditions:—psycho-motor restlessness, flight of ideas, and emotional excitement. While melancholia, the depressed type under Kraepelin classification, there is a psycho-motor retardation, difficulty in thinking, emotional depression. Mild cases may be cared for at home under suitable precautions but acute forms better at hospital. Marriage should not occur in these types of alienation. Some instances of neurasthenia are in reality subacute types of depressed form of manic-depressive insanity. Baths, tonics, open air, rest, general treatment for mild, home cases are helpful.

Melancholia of the involutional period by some is grouped with the preceding, the modification being attributed in a degree to changes incidental to the ductless glands. A large proportion of this type of aberration are women and about one-third recover. Anxiety, insomnia, depression, despair are characteristic symptoms including self-condemnation. Suicidal thoughts common and care ought to be exercised in this respect. Organotherapy used oftentimes with effective results, cases usually better and safer at hospital than at home. Operation about time of climacteric frequently followed by mild psychosis, and rest, open-air, tonics and other appropriate treatment and care bring favorable changes. However age, nervous condition, heredity, etc., should be considered prior to operation on women

at the menopause besides immediate necessity of surgical procedure.

Frequently the practitioner's attention is called to some form of functional nervous trouble, such as an occupational neurosis for instance, pianoforte player's palsy being a not uncommon example or a seamstress's palsy, and upon careful inquiry many such cases occur in the hysterical or neurotic, so that besides the nervous element and overstrain of the particular muscles involved there is the psychic involvement occasioning what is termed a neuro-psychosis. These cases usually are amenable to treatment, the important factor of which is the adoption of a new vocation and releasing the fatigued muscles from further strain. Trauma too is often attended by psychic and nervous disturbance, the injury mentally and nervously frequently being worse than the traumatism itself. Suggestion or hypnosis with other measures aids much in certain instances. Psycho-analysis also may be used to advantage.

Epilepsy of the so-called idiopathic type reveals itself commonly by attacks of the grand or petit malform but at times there occurs an acute mental outbreak, the psychical epileptic equivalent. This disease prevails more in the rural than the urban localities and slightly preponderating with the males. Heredity is the most potent influence, over one-third of cases exhibit some neuropathic family history. Alcoholism, trauma, sunstroke, toxaemia, reflex irritations including genital, rachitis at period of dentition, etc., are some of the exciting causes. Development is usually noted between the ages of five to twenty years, however there may occur cases of retarded outbreak. Reed in seven hundred cases (100 per cent.), either by X-ray or operation, found intestinal stasis of mechanical type. Jacksonian epilepsy, commonly due to trauma and pressure are at times amenable to surgical treatment if undertaken at an early stage. It is always symptomatic of some focal lesion affecting the cortex (motor) of the brain. Besides trauma, syphilis or tumor are to be borne in mind. The convulsive seizure usually involves certain muscle groups and quite commonly without loss of consciousness. Psycho-analysis is used in the treatment of the psychic type of cases. The claim being that the seizure is the

result of a subconscious desire or instinct of infantile life. Treatment to be effective must be careful not only in respect to diet, hygiene, bowels, etc., but also to continuance of several years. Bromides still are recommended. In certain cases endocrinal gland substances. Epileptics ought not marry. Open air and some form of manual education is preferable in a large proportion of instances. Institutional custody is to be recommended, especially as a safeguard to the community, in a great percentage of cases.

Hysteria according to the Freudian school is attributed to repressed sexual instincts, while Janet considers it a manifestation because of conflict between certain conscious and subconscious dissociated idea groups. Where the associations of the conscious groups are such as to constitute a complete personality and at the same time the subconscious condition is similar there exists a dual personality and an interchange from one to the other at times may occur. Thus the case of Dr. Jekyll and Mr. Hyde. Heredity has a great deal of prominence in this disorder and exists both in the male and female as well as with the children of either sex. The time for prophylactic measures is usually during childhood. Judicious mental and moral discipline and training, open air, exercise, work, wholesome food and hours, regularity of functions, essential quietude and sleep will greatly tend to offset outbreaks at later periods of life.

Drug addiction and alcoholism are of frequent occurrence, and while alcoholic excesses and mental states are lessening and undoubtedly will more so after the enforcement of the "Dry" amendment yet the "Dope" cases despite federal and state restrictions will very likely increase.

It will hardly be necessary to go into detail concerning the prophylaxis relative to alcoholism. Such is possible by the practitioner. But in cases of certain types due to alcohol the hospital is the better and, in fact, the only appropriate place for treatment. Chronic cases often are of bad heredity and in time mental deterioration becomes manifest. Aberrations frequently are of a dangerous character and may be paranoid in type or may simulate paresis.

Morphin, heroin, and cocain. Cocain per se is often used for its exhilarating effects and its immediate withdrawal is said not to be attended with alarming results. However it is usually combined with some opium derivative which effects another difficulty in treatment. Pettey writes, in such instances, first cut off the cocain and then slow treatment in respect to the opium.

Morphin, etc., can never be treated successfully as a rule by gradually diminishing dosage. Pettey's idea, also Lambert's, to me seem the best as yet presented. Cut amount of drug and at same time eliminate freely toxic substances retained in the system, etc.

Home treatment for drug addiction is not suitable, and restrictive drug regulations to meet the entire purpose seemingly should have been accompanied with provisions for hospital treatment as well.

Shell Shock. Apparently this term is meant to include cases of hysteria, likewise those of cerebral concussion with minute capillary hemorrhages, and the combinations of same when occurring. It has been explained in relation to the traumatic form that the atmospheric pressure and release vacuum from heavy shells is so great at times that a concussion is produced which in the neurotic occasions mental upset as well as cerebral traumatism. The treatment of these cases may be, according to form, by the mental hygienist or the surgeon. Psycho-analysis being of help according to individual. Many of shell shock victims will return home unsuccessfully treated, and the practitioner by ascertaining more definite histories, may by suggestion, etc., cure hysterical patients coming to their notice.

In considering therefore the foregoing statements, mental instability of the inherited type particularly, often in the young and adolescent, presents indications which if recognized and treated may result in the prevention of later mental ailment. And because of the association ordinarily of the practitioner these deviations from the normal should not only be noted, but follow-up work, either under the advice of some mental hygienist, or mental hygiene clinic, as necessary, should be encouraged. Acquired states such as alcoholism, morphinism and syphilis,

can be met in many instances early enough for appropriate, successful treatment. And this is especially so to-day with cerebral syphilis and paresis, inasmuch as the prodromal symptoms can be verified by serological tests, and appropriate therapeutics applied in time sufficiently advanced to warrant successful results.

THE NEW X-RAY LABORATORY AT THE ALBANY HOSPITAL.

By JOHN M. BERRY, M. D.,

Radiographer, Albany Hospital.

When the present main buildings of the Albany Hospital were constructed in 1898, the X-rays had been discovered only three years before; and, as was the case, in practically all the hospitals built at that time little or no provision was made for an X-ray laboratory. The value of the X-ray laboratory was not understood and in most hospitals of the period a room for an X-ray machine was tucked away in some obscure corner or remote portion of the basement of the building.

Now all that is changed. Whereas originally the use of the X-ray was limited practically to fracture work; now there is not a branch of medicine or surgery that does not find it of use as an aid to diagnosis. No modern hospital is considered complete without an X-ray laboratory: and together with the operating room, the pathological and clinical laboratories, it is considered one of the show places of a hospital.

Even yet, however, many large modern hospitals have paid but little attention to the situation and arrangement of the X-ray laboratory, and but little thought has been given to the comfort and convenience of patients.

The Albany Hospital has for many years wished to provide larger and better quarters for the X-ray department. The first X-ray room for the Hospital was on the main floor in a room since remodeled and now used as an extra office by the Superintendent of Nurses. This room was originally dark and stuffy and not any too large for the big multiple disk static machine

which was used to excite the X-ray tube. The dark room for developing plates used to be in the basement of the building, directly under the X-ray room until it was found that the X-rays came through the floor and fogged the photographic plates. Later the X-ray room was changed to the dispensary, in lower "D" basement, in the room now used by Dr. Bedell as a dark room for eye examination, this latter room was darker, stuffier and smaller than the former and its situation and accommodation for the X-ray department proved to be impossible and the original room was reoccupied. A small dark room was fitted up off from the X-ray room and the department remained housed here for several years. By this time the work had increased in quantity and importance to such an extent that another change was thought advisable and the department was again moved to the dispensary. The department now had a combined office and waiting room, an X-ray operating room and a dark room. Subsequently by partitioning off the hall and dividing up one of the other dispensary rooms a dressing room was added and the office was separated from the waiting room. The situation of the department in the dispensary, however, was far from ideal, especially from the standpoint of private patients: and although the equipment was up to date there was need of a duplication of apparatus; first, to guard against accident to an essential part, thus stopping the work of the department and causing a loss to the hospital that could not be estimated; and, second, to allow the work to be performed in less time and avoid irritating and tedious delays to patients.

In the meantime changes had been taking place in other departments of the hospital. The new nurses' home had been built leaving the old nurses' home vacant. The pathological and clinical laboratories had been established on the top floor of this building and the electrocardiographic laboratory and a large lecture room were located on the main floor. The board of governors of the hospital were convinced that the remaining rooms on the main floor of the old nurses' home would make an ideal situation for a better and bigger X-ray department and the work of remodeling was started in the latter part of 1919 and is now completed and the department moved.

The new X-ray department occupies a suite of thirteen rooms on the main floor of the old nurses' home on either side of the central corridor. The following is a general description of the various rooms and their uses.

THE OFFICE.

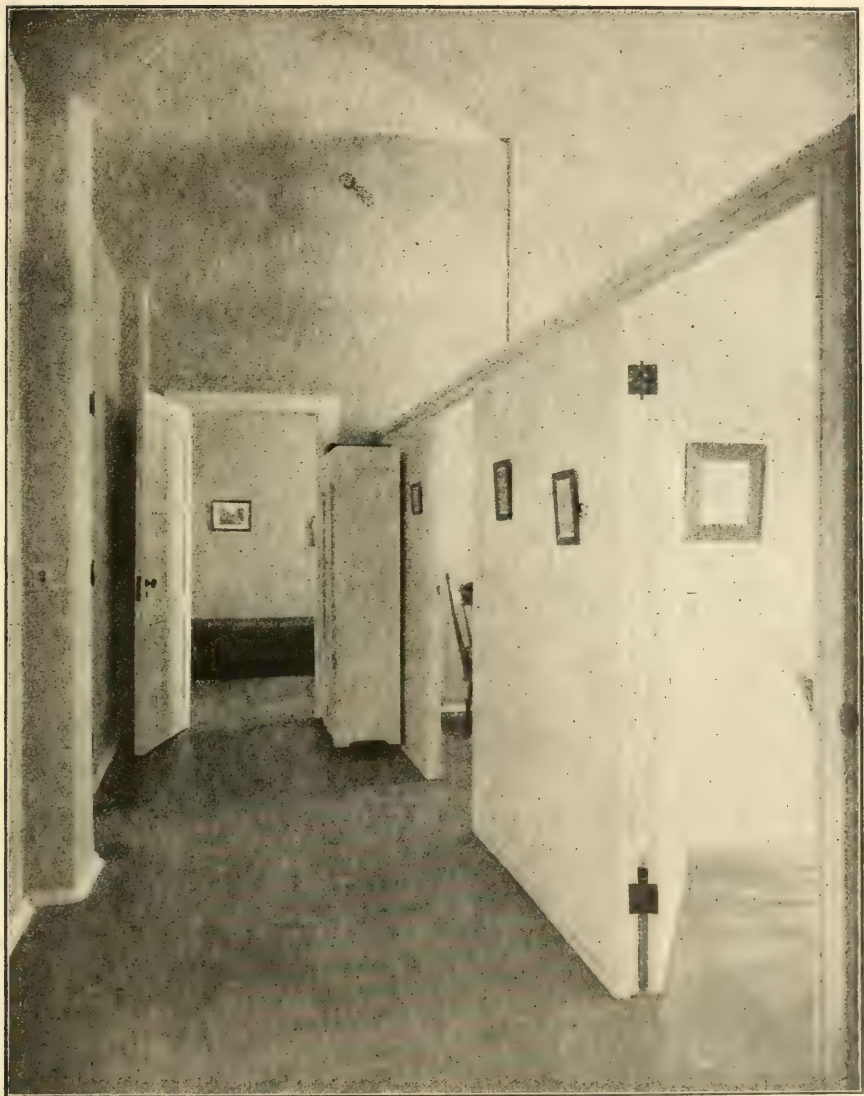
The office of the department is on the west side of the central corridor, next to the electrocardiographic room. The office is equipped with filing cabinets for both the X-ray records and plates. The plate cabinets extend from the floor to the ceiling at both ends of the room furnishing filing space for hundreds of X-ray negatives of all sizes. This means that the X-ray negatives will be readily accessible at all times, a convenience that will be much appreciated by any doctor who may wish to examine an X-ray plate taken some time before.

Very complete records are kept of all the roentgenological cases. The records show the name of the patient, the date of the roentgenological examination or treatment, the physician or surgeon in charge of the case, the clinical diagnosis, the roentgen diagnosis and the revised diagnosis. There is also a cross index file of the roentgen diagnosis (disease or lesion). This is very valuable for locating plates for teaching purposes or for research work.

With the above described system of records it is possible to locate a case by the date of the X-ray, the name of the patient or the roentgen diagnosis, any of which means may be necessary at times, as experience has shown.

A record is also kept of the technic used in making every roentgenogram. Such a record allows of a duplication of result at any future time and by constant comparison of results it is possible to improve the standard of technic.

A portion of the office is set aside for the use of the X-ray lantern slide and reducing camera. With this camera lantern slides will be made of all interesting X-ray negatives and also small reduced prints suitable for filing with the hospital record or the private record of the doctor who referred the case to the department for examination. Lantern slides of these cases will



Private Dressing Rooms and Corridor, X-Ray Laboratory, Albany Hospital.

be kept on file and will be loaned to the doctors on application for discussion at medical meetings, clubs, etc.

THE PLATE VIEWING ROOM.

The plate viewing room is directly across the central corridor from the office and has filing cabinets for X-ray negatives at both ends of the room similar to those in the office.

A viewing box sixteen feet long with racks for plates on both sides, occupies the center of the room. The viewing box is divided into eight sections, four on either side, and is so constructed that the racks can be adjusted to take any size plate. This makes it possible to fill up the entire viewing box with 14 x 17 chest plates, or any other size of plate desired, for demonstration purposes.

The plate viewing room is also equipped with a Wheatstone stereoscope for examining stereoscopic plates.

THE LAVATORY.

The lavatory is on the east side of the corridor next to the plate viewing room.

THE DARK ROOM.

The dark room is the next room beyond the lavatory on the same side of the corridor. The entrance to this room is equipped with a light proof maze wide enough so that two people can pass each other. Realizing that seventy-five per cent of poor results in X-ray picture work is due to dark room trouble the arrangement and equipment of this room has been given special attention. It is equipped with plenty of shelf and bench room and is arranged for both tank and tray development. Ventilation of the room is taken care of by an electrically driven light proof exhaust fan.

When the laboratory was planned the arrangement of the rooms was made such that the office, viewing room and dark room was at one end of the corridor and the waiting rooms, dressing rooms and X-ray operating rooms were at the other end. This arrangement assures privacy to the patients and avoids interference to the work in the operating rooms from doctors and stu-

dents coming to view plates, consult records, etc. The operating end of the laboratory is divided into a public and private side.

THE PRIVATE DRESSING ROOMS AND X-RAY OPERATING ROOMS.

The private dressing rooms and X-ray operating rooms are on the west side of the corridor. The private dressing rooms are three in number and open into a private corridor parallel to the main central corridor. This private corridor opens directly into the X-ray operating room, thus insuring privacy to the patients.

The private X-ray operating room is a model of efficiency and compactness. The windows are fitted with light proof shutters that can be closed for fluoroscopic work. Ventilation in the room is taken care of by an electric exhaust fan.

The equipment is all new and thoroughly up to date and consists of the following apparatus:

A Victor Model Snook Roentgen interrupterless transformer complete with resistance and auto-transformer controls, double scale milliamperemeter, polarity indicator, spark meter, lead glass protected control unit, etc.

Victor Coolidge transformer, regulator, ammeter, etc.

Victor Wantz teleflasher time switch.

Victor Roentgen table No. 5, combining an ordinary X-ray table and tube stand with horizontal and vertical stereoscopic shift and horizontal fluoroscopy with attached screen to move in unison with the X-ray tube.

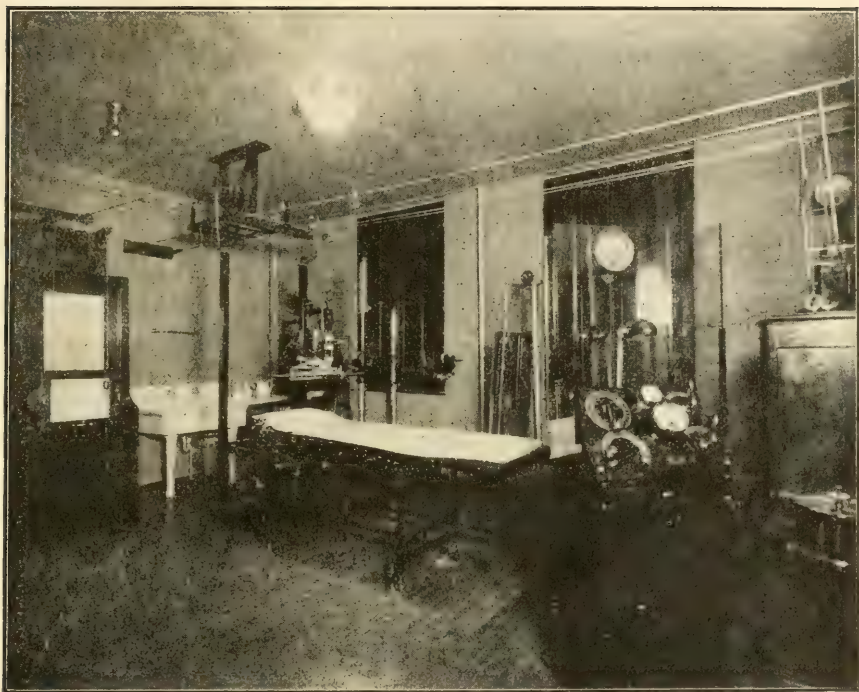
Vertical Roentgenoscope with fluoroscopic screen.

Victor vertical stereoscopic plate shifter for chest work.

Treatment stand.

The X-ray tubes for the various units are operated through a tubular overhead wiring system free from corona and the high tension current can be thrown into any tube desired by means of a system of high tension switches. This makes the change from vertical or horizontal fluoroscopic work to picture work a very easy matter.

For fluoroscopic work the room is lighted by a blue light on the ceiling and by a system of wiring it is arranged that on the



Private X-Ray Operating Room, Albany Hospital.

pressing of a button the blue light goes out and the X-ray tube goes on, and vice versa; when the X-rays are shut off the blue light returns.

THE PUBLIC WAITING ROOM, DRESSING ROOMS AND X-RAY OPERATING ROOM

The public waiting room, dressing rooms and X-ray operating room are on the east side of the central corridor and opposite the private rooms. The waiting room is used in common by men and women but there are two dressing rooms, one for women and one for men. The waiting and dressing rooms communicate with the operating room by a private corridor.

The public X-ray operating room is practically a duplication of the private except that the apparatus is of an older model. The equipment includes a Kelly-Koett eye localizing apparatus and a Kelly-Koett foreign body localizer for the trunk and extremities.

THE CYSTOSCOPIC ROOM

On the public side of the central corridor and communicating with the public waiting room and X-ray operating room is the cystoscopic room. By throwing a high tension switch in the public X-ray operating room the over head current can be diverted into the cystoscopic room and there used for picture work. The room is equipped with modern operating room wash basin, a sterilizer, table, tube stand, etc. With this room and equipment it is now possible to cystoscope the patient, pass ureteral catheters and obtain a roentgenogram without moving the patient from the table.

Clinical and Pathological Notes

My First Case: A "Psychological Study." By W. H. MORSE, M. D.

In the town in which I commenced the practice of medicine there resided a widow of ample means, occupying her cottage on one of the principal streets, and living alone. Her husband had been killed in a railway accident in the seventies. He had left home early one morning, to take the train for New York, and at the station had been struck by a locomotive and instantly killed. When the body was brought to the house the woman was scrubbing her front stairs. From the time of her loss she lived quietly, respected, but secluded. Then in the year before I began practice she occasioned considerable comment in the town by a second marriage, which took place in a Connecticut city. The new husband was a stranger, and was announced by the bride as being an evangelist, and as qualified to write Reverend before his name. Immediately upon his arrival in town he had signalized himself by attending one of the churches, and in participating in the prayer meetings, where, in lengthy harangues he had inveighed against the Roman Catholics. This continued but a short time, and ceased when the Catholic priest made him a call, the nature and object of which was not known until much later when it came out that the priest had identified him with the proprietorship of a gambling place in New York. After this he was not seen at church, and spent a good deal of time in New York.

It was perhaps a year after the marriage which had provoked much talk in the town, when one morning the man called at the office which I had just opened, and where I was awaiting patients. When he introduced himself there came at once to my mind the village gossip about his being an adventurer, intent on a peculiar interest in his wife's property. He was dressed in clerical black, and his manner was as suave and unctuous as could be. He began by saying that he had understood that I had graduated from the Albany Medical College, and had there listened to the lectures of Dr. John P. Gray on mental diseases. Then, archly, and in a manner that was calculated to please a

young physician, he said he wanted to consult me as an alienist, and placed a bill of large denomination in my hand.

"My wife," he then proceeded to say, "is so peculiar, and I have fears that she is losing her mind. If unfortunately I am right about this, I must ask to be appointed conservator of her property so that she may not waste it. I want you to examine her, and let me and my lawyer know what you think. In the first place, I want you to call at the house any morning at nine o'clock, and you will find her with brush and water, scrubbing the stairs. And, if you will do so, you will repeat the call at that hour on any week day, and you will find her engaged in that way. Why? That was what she was doing when her first husband was brought home dead at that hour; and from that day, at that hour she does that same thing. Mental disorder, eh? I am afraid so. But that is not all. I want you to visit her on the 21st of September and again on the 22d. You will understand the reason when you do so."

He did not say anything further. The next morning at nine I called at the cottage to ask for some roses from the woman's garden. Her front door stood open, and there, sure enough, she was busy scrubbing the stairs. After that, for three or four mornings I took pains to investigate and each time found her at that employment. On entering into conversation with her, there was no evidence of mental aberration. I said as much to the husband when he called a second time for my report.

"Too bad! Too bad!" he said. "And now," he continued, "I want you to speak with her casually about two matters. Get her views on the use of tobacco. And ask her at the same time where you can get some heavy hose."

As he again paid a liberal fee, I did as he suggested. I found that the woman abominated the tobacco habit, and upon the inquiry as to the stockings, learned that she was a confirmed knitter, and every evening was occupied in the use of the knitting needles, and was glad to let me have as many hose as I needed. She descanted heartily on knitting, and made fun of crocheting and fancy work.

"Very well," said the husband. "Now remember to call on her on the 21st and 22d September."

The 21st brought the equinoctial storm. It was shortly after noon when I rang the bell at the cottage. It was answered by the woman, and in her mouth was a cigar, which she was diligently puffing. I was a bit astonished, and excused myself by asking if I might have some of her gladioli the following day for the pulpit vase at church. She replied that if the rain did not injure the blooms I might have as many as I wanted. I left her smoking. The following day I called for the flowers. She gave me a generous bouquet, and as we stood on the veranda she spoke of her delight in flower culture.

"It is my dearest fad," she said, and added, "some women make a fad of knitting, but I have no patience with a woman who is always knitting."

I registered my second surprise at this remark. In the evening her husband came to see me. He had barely opened the interview by asking if I did not find her "deranged," when she walked into the office.

"There now, it's just as I thought!" she began. "You put the doctor up to it! Huh! Now Doctor, see here! I am not crazy. Not a bit of it! My father's birthday was September 21st, and my mother's was the 22d. We kept both. Father was a great smoker, and mother a great knitter, but on his birthday he never smoked a whiff, and she on her birthday would not touch her knitting. Perhaps it is because the birthdays came right together, but every year when they come around, I, who hate tobacco, must smoke on his birthday, and though I love knitting, on her birthday nothing must do but I must run it down. You," turning to her husband, "you are trying to get the doctor to observe, so's to see if I'm not demented. You also have told him and others how every morning I do that which I was doing that day when I met with my greatest loss! And you have been consulting a lawyer about being made conservator! Huh! Doctor," turning to me, "I am on to his tricks! Fool I was to marry him!"

A few days later I met the priest on the street, and he told me that incident to a visit which he had received from the woman, the "reverend" husband had left town. I found this to be true, and he was never seen in the place again. At the next term

of court the woman obtained a divorce. She died several years after. The eccentricities which had interested me continued notable among her neighbors, and to them, in a corollary, was, at the last, added another. In her will she left a sum of money to the priest who had unmasked her husband, with directions that he expend it in Testaments for the children of his parish.

“‘Deranged?’” repeated an old neighbor the other day when I spoke of her. “Not at all! Rational as any one. But—how do you account for her oddities?”

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

DEATHS FOR MONTH OF MARCH, 1919

Consumption	12	Broncho Pneumonia	11
Typhoid Fever	0	Bright's Disease	9
Scarlet Fever	0	Apoplexy	12
Whooping Cough	0	Cancer	13
Diphtheria	1	Accidents & Violence.....	7
Influenza	6	Deaths under 1 year.....	20
Measles	0	Deaths over 70 years.....	52
Diarrheal Diseases	3	Death rate	18.00
Pneumonia	11	Death rate less non-residents	15.86

Deaths in Institutions.

	Non- Res.	Res.		Non- Res.	Res.
Albany Hospital	8	11	Public Places	1	1
Albany Hospital T. S... ..	1	1	St. Peter's Hospital....	3	19
Albany Co. Hospital....	0	4			
Convent Sacred Heart..	0	1		19	50
Homeopathic Hospital..	1	7			
Home for the Aged....	1	2	Births		207
Maternity Hospital	3	4	Still Births		8
Pine Hills Sanitarium..	1	0			

DIVISION OF COMMUNICABLE DISEASES

Typhoid Fever	2	Tuberculosis	19
Scarlet Fever	61	Mumps	74
Diphtheria and Croup.....	4	Pneumonia	35
Chickenpox	19	Influenza	253
Smallpox	0	Septic Sore Throat.....	6
Measles	5		
German Measles	0	Total	507
Whooping-cough	29		

Number of days quarantine for scarlet fever:

Longest..... 33 Shortest..... 30 Average..... 30 $\frac{7}{32}$

Number of days quarantine for diphtheria:

Longest..... 32 Shortest..... 12 Average..... 24

Fumigations:

Rooms..... 411 Buildings..... 53
Milk bottles disinfected 569

Communicable Diseases in Relation to Schools.

	Reported D. S.F. M.		
Public School No. 2.....	..	2	..
Public School No. 4.....	..	1	..
Public School No. 7.....	..	1	..
Public School No. 12.....	..	3	..
Public School No. 14.....	1	2	..
Public School No. 18.....	..	4	..
Public School No. 21.....	..	1	..
Public School No. 24.....	..	3	..
Blessed Sacrament School.....	..	1	..
Kenwood School .....	..	4	..
Albany Boys Academy.....	..	1	..
Holy Cross School.....	1	1	..
St. Patricks Institute.....	..	1	..
Christian Bros. Academy.....	..	1	..
St. Ann's School.....	1	1	..
St. Mary's School.....	1	..	..
St. Casimir's School.....	..	2	..

MISCELLANEOUS.

Cards posted for communicable disease	56	Vaccination dressings.....	54
Cards removed	39	Children examined for employment certificates	21
Notices served on schools..	207	Number of employment certificates issued.....	20
Notices served on stores and factories	17	Taking specimens of blood for Wassermanns.....	1
Postal card returns sent to doctors	56	Taking smears for Gonococci	0
Postal card returns received from doctors	39	Miscellaneous investigations by Seventh District Physician	1
Inspections and reinspections	64		
Vaccinations	21		

Tuberculosis.

Living Cases on record March 1, 1920..... 837
Cases reported:

By card	12	
Dead cases by certificate.....	7	19
		<hr/>
		856
Dead cases previously reported.....	5	
Dead cases not previously reported.....	7	
Removed	36	
Died out of town.....	0	
Recovered	0	
Unaccounted for	0	48
		<hr/>
Living cases on record April 1, 1920.....		808
Total Tuberculosis death certificates.....		12

Non-resident deaths:

Albany Hospital Camp.....	1	
C. F. L. Pavilion.....	0	
County Hospital	0	
St. Margaret's House	0	
City at large	0	1
Resident deaths		11
Visits to cases of tuberculosis.....		366
Miscellaneous visits		12
Visits to physicians.....		38

LABORATORY REPORT.

Diphtheria.

Initial Positive	8	Unsatisfactory	2
Initial Negative	264		
Release Positive	10	Total	330
Release Negative	46		

Sputum for Tuberculosis.

Positive	72	Unsatisfactory	0
Negative	170		
		Total	242

Widals.

Positive	2	Unsatisfactory	1
Negative	17		
		Total	20

Meningococcus.

Positive	0		
Negative	0	Total	0
Wassermann tests (positive 52)	311	Gonorrhoea Examinations (positive 20)	75
Milk Analyses	116	Miscellaneous examinations.	5
Water Analyses	0		
Pathological Examinations..	0	Total Examinations.....	1099

HEALTH PHYSICIANS REPORT.

Cases assigned	70	Calls made	174
----------------------	----	------------------	-----

DIVISION OF SANITATION.

Complaints	63	Reinspections	41
Inspections	59	Plumbing	16
Plumbing	16	Sanitary	25
Sanitary	43		

HEARINGS.

Hearings	1	Cases heard	1
----------------	---	-------------------	---

Class of Cases.

Water			1
-------------	--	--	---

Disposition of Cases.

Reinspection.....	1	Abated.....	0
-------------------	---	-------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	84	Blue or red	0
Old Houses	27	Peppermint	5
New Houses	57	Water test	16
Permits issued	41	Houses examined	22
Plumbing	36	Re-examined	79
Building	5	Valid	11
Plans submitted	14	Without cause	11
Old buildings	10	Violations	0
New buildings	4	Plumbers' License Plates	
Houses tested	21	furnished	1
Smoke	0		

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	23	Cats removed	72
Dogs removed	61		
		Total	156

DIVISION OF MARKETS AND MILK.

Public market inspections...	25	Milk cans inspected	330
Market inspections	148	Milk cans condemned.....	0
Fish market inspections....	18	Lactometer readings	54
Fish peddler inspections....	0	Temperature readings.....	54
Slaughter house inspections	3	Fat tests	34
Rendering establishment in-		Sediment tests	0
spections	1	Chemical tests	0
Pork packing house inspec-		Cows examined	0
tions	4	Cows quarantined	0
Hide house inspections.....	0	Cows removed	0
Milk depots inspected.....	20	Complaints investigated	5
Stores inspected	148	Milk condemned	80 qts.
Dairies inspected	0	Bob veal condemned.....	325 lbs.

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—REPORT FOR MARCH, 1920.—Number of new cases this month, 297; classified economically: Free; bed cases, 64; prenatal, 13; dispensary soc. service, 13; tuberculosis (positive), 12; tuberculosis (supervision), 2; hospital soc. service, 31. Paid, limited means, bed cases, 52; metropolitan, bed cases, 95; metropolitan, prenatal, 14; industrial, bed cases, 1; industrial, social, 0. Cases carried over from last month, 1096; nursing cases, 98; prenatal cases, 46; dispensary soc. service, 8; tuberculosis (total), 628; hospital soc. service, 206; venereal, 110; industrial, 0. Division of nursing cases: Medical, 145; surgical, 22; obstetrical, 45; prenatal, 27; babies, 26; maternity, 2; confinements, 15; miscarriages, 4.

Visits for Nurses (all departments): 1,718; for nursing care, 1,295; prenatal instruction, 42; tuberculosis (sup. and instr.), 56; venereal disease (instr.), 31; hospital social service, 12; general social serv. (incl. disp.), 161; supervision, 60; for other purposes, 61.

Source of Nursing Cases.—Metropolitan agents, 70; doctors, 49; nurses, 17; dispensary, 2; family of friends, 82; other sources, 18.

Disposition of Nursing Cases.—Discharged recovered, 37; discharged improved, 164; discharged unimproved, 29; discharged dead, 8; discharged to other care, 25; carried, 137. Disposition of other cases: Prenatal: To maternity and other care, 31; carried, 42. Dispensary Social Service: To dispensary care, 10; carried, 11. Hospital Social Service: Discharged, 175; carried, 62. Venereal: Discharged, 4; carried under care, 32; carried under supervision, 53; carried under care at the House of Good Shepherd, 18. Tuberculosis: Discharged (pos. and sup.), 162; discharged dead, 22; carried, 436. Industrial: Discharged (social or bed cases), 1; carried, 0. Number of cases carried over into April, 931; nursing, 95; prenatal, 42; dispensary soc. service, 11; hospital soc. service, 62; venereal, 103; tuberculosis, 436; industrial, 182.

South End Dispensary Report.—Number of clinics, 68; surgical, 9; medical, 8; gynecological, 7; prenatal, 4; eye and ear, 14; venereal, 7; nerve, 0; nose and throat, 7; skin, 3; children, 0; lung, 0; children's lungs, 5; number of new patients attending, 131; number of old patients attending, 515; clinics with doctor attending, 57; clinics without doctor attending, 11; total number of patients treated, 646.

Industrial Dispensary (at Huyck's Mills)—Number of clinics held, 17; number of new cases treated, 78; number of old cases treated, 104; total number treated, 182; number of physical examinations, 15; number of cases carried, 182.

GOVERNMENT NEEDS PHYSICIANS.—The United States Civil Service Commission announces that a large number of physicians are needed for employment in the Indian service, the public health service, the coast and geodetic survey, and the Panama canal service. Both men

and women will be admitted to examinations, but appointing officers have the legal right to specify the sex desired when requesting the certification of eligibles.

Entrance salaries as high as \$200 a month are offered, with prospect of promotion in some branches to \$250, \$300 and higher rates for special positions.

Further information and application blanks may be obtained from the secretary of the U. S. civil service board at Boston, New York, Philadelphia, Atlanta, Cincinnati, Chicago, St. Paul, St. Louis, New Orleans, Seattle or San Francisco, or from the U. S. Civil Service Commission at Washington, D. C.

WAR'S EFFECT ON FRENCH CHILDREN.—The effect of the war on the children of France is shown in a recent report submitted by the American Red Cross headquarters at Lille. The figures are furnished by the Municipal Bureau of Hygiene.

The city had a pre-war population of 200,000. The birth rate has shrunk from nearly 4,900 in 1913 to only 600 in the past year. The figures by year follow:

1913.....	4,885 births
1914.....	4,540 births
1915.....	2,155 births
1916.....	640 births
1917.....	600 births
1918.....	600 births

This indicates a total loss of 15,000 births during the war.

The death rates according to ages are not known, but since the armistice a survey has been made in all public and private schools with a view to obtaining appropriate food for all children whose development has been retarded, and to place all those who show signs of tuberculosis in the care of institutions and welfare organizations. Of 18,000 children in school at Lille at the time of the armistice, over 6,000 had to be sent to hospitals or convalescent centers.

This survey indicated that 60 per cent of the school population showed signs of arrested development, while about 40 per cent gave evidence of ganglionic or pulmonary tuberculosis. In one typical school, out of two hundred and ten examined, only one was in normal health.

DEVELOPMENT OF A NURSING PROFESSION IN POLAND.—Outside of the Catholic sisterhoods the profession of nursing is still practically unknown in Europe. Even the good old-fashioned home or practical nurse of the States does not exist. This seems strange, in view of the fact that the Sisters of St. Vincent de Paul were the first women in history to go out in the battlefield to care for the wounded, and that it was from the

French Sisters of Mercy that Florence Nightingale drew her first inspiration and learned her first lessons in nursing. That America and England have gone so far ahead of Continental Europe in this respect is due to the greater freedom of women in English speaking countries.

Since the war, however, since Europe has had a practical demonstration of what American and English trained nurses have done and are doing, these countries have realized the great value of a trained nursing personnel, and training schools are being opened and hundreds of volunteers instructed.

In Poland there are now over fifty Polish Nurses' Aides who are studying in various hospitals under American direction. When Lieutenant-Colonel Chesley, American Red Cross Commissioner to Poland called for thirty volunteers for a beginners' class, over a hundred and fifty applicants responded, and these beginners are now receiving preliminary training from the chief nurse. It is in this eastern field of the war, where fighting still wages, and where thousands of sick and hungry refugees are making their way back home from their exile in Russia, that the need of nurses and modern nursing methods is most felt at the present time. "The suffering and deaths that have occurred in this locality have emphasized more than anything else the great shortage of nurses," says Mrs. Jokaitis, chief nurse of the Red Cross. "But Poland is wide awake, and the Polish doctors have no foolish old-fashioned ideas about women. They are all for modern ideas and progress."

Indeed the enthusiasm of the Poles over American ideas is unbounded, and the speed with which Polish girls of the best type are being recruited for the work is extremely encouraging. "I wouldn't be surprised to see Poland become the center of woman's activity in Europe," commented Mrs. Jokaitis. "This country gives promise, in many ways, of being a 'second America' once she gets on her feet. And the women of Poland will have a big share in getting her there."

A SCHOOL FOR NURSES IN BOHEMIA.—Prague is to have the first training school for nurses in Czecho-Slovakia. Realizing that the shortage of native doctors and nurses caused by the war was a very serious problem, and that the best way of solving it was to train native personnel, the new Government, through Dr. Alice Masaryk, daughter of the president of the republic, appealed to the American Red Cross for assistance. A plan has been worked out, for which the Red Cross appropriated \$20,000, and is already in operation. Two American Red Cross nurses, Miss Marian Parsons, former chief nurse of General Hospital No. 22, British Expeditionary Forces, and Miss Alotta Lentell, who served with the Red Cross in Flanders, have recently arrived in Prague to establish the school. Miss Parsons will be the superintendent, and Miss Lentell will be her assistant.

During the three years that these American nurses remain in Czecho-Slovakia, two young Czecho-Slovakian women will be sent to the United States to enter an American training school and prepare themselves to return to their own country and carry on the work initiated by the Ameri-

can nurses. The Massachusetts General Hospital, Boston, has agreed to accept these pupils as soon as they arrive in this country.

EDUCATING THE RURAL DISTRICTS IN SOCIAL HYGIENE.—In line with its purpose of bringing health education directly before the people, particularly in remote rural districts, and of coöperating with all existing public health agencies and societies, the American Red Cross has just appropriated \$10,000 as a donation to the American Social Hygiene Association to aid that organization in establishing a traveling exhibit on social hygiene. The exhibit will be mounted on a motor truck and will consist of a motion picture machine with films and slides on social hygiene, a fireproof booth that can be set up in schoolhouses or churches, and large quantities of literature and posters. A representative will precede the exhibit into each community in order to line up its special problems so that they can be dealt with specifically.

The American Social Hygiene Association was formed in 1914 by the union of the American Vigilance Association and the American Federation for Sex Hygiene, and later merged with the New Morrow under the name of the Society of Sanitary and Morale Prophylaxis. During the war, having secured from private sources some half-million dollars, it supplemented the governmental efforts in combating venereal disease by coöperating with official agencies that were promoting the campaign in and around military and naval establishments.

The Association is now back on a peace-time program, but greatly enlarged and strengthened by its own experiences as well as that of the nation generally during the war. Its program has proved successful, and has been adopted in substance and expressed in terms of administrative organization and legislation by almost every state in the union.

Recently the Board of Health of North Carolina suggested to the Association the value of a traveling exhibit which could go through the rural districts and bring their special problems squarely before the communities. Through the American Red Cross this was made possible. The first demonstrations will be made in North Carolina, and will be followed by demonstrations in other states. The Board of Health will pay rent for the exhibit which will cover actual expenses.

AN AMERICAN FIELD HOSPITAL FINALLY STATIONED.—An American Field Hospital which traveled from Hoboken to France, from Bordeaux to Germany, from Trier to Constantinople, and from Constantinople to Ekaterinburg, Russia, has finally been placed with the southern division of General Kolchak's army.

The hospital was shipped to France for the use of the American Expeditionary Force, but the signing of the armistice made it superfluous property. There is no more critical need for medical service than in southern Russia. The Red Cross has, therefore, delivered the modern mobile plant valued at \$100,000 for the use of the Cossack forces.

The hospital has five hundred beds and two operating rooms and includes all equipment needed for immediate operation.

BIOGRAPHY OF SIR WILLIAM OSLER.—Lady Osler has requested me to prepare a biography of her husband and I will be most grateful to anyone who chances to see this note, for any letters or personal reminiscences, or for information concerning others who may possibly supply letters.

Copies of all letters, no matter how brief, are requested, and if dates are omitted it is hoped that they may be supplied if possible.

If the original are forwarded for copy they will be promptly returned. Harvey Cushing, M. D., Peter Bent Brigham Hospital, Boston, Mass.

Dr. HARRY W. CAREY, 72 Second street, Troy, N. Y., announces that he has acquired radium element in sufficient amount for all therapeutic purposes.

PERSONAL.—MARRIED. DR. RICHARD B. GRAY (A. M. C. 1910) and Miss CATHERINE D. SHERWOOD were married at Rensselaer, N. Y., on April 5, 1920. Dr. Gray is Health Officer of the City of Rensselaer, and will continue in practice at 1207 Broadway, Rensselaer, N. Y.

In Memoriam

LOUIS NOTT LANEHART, M. D.

Dr. LOUIS NOTT LANEHART died suddenly on Sunday morning, April 25th, 1920, after a short illness. Dr. Lanehart was graduated from the Albany Medical College in 1883 and for a few years practiced as physician in Rensselaerville, New York. After leaving there, he served for a short time as interne in the Presbyterian Hospital, New York City, and then moved to Hempstead where he soon acquired a large and lucrative practice and became a prominent figure in the medical profession on Long Island. He served for several years as health officer of the town of Hempstead, and was a leader in the movement which resulted in the establishment of the Nassau Hospital and was president of the Medical board for about ten years.

He then became active in the establishment of the Hempstead Hospital of which he was president during its existence. With the opening of the Mercy Hospital he became president of the medical staff, which position he held at the time of his death. He was one of the founders of the Associated Physicians of Long Island, and its first president, and for the past twenty years was very active in the management of that society. He was also president of the Queens-Nassau Medical Society and vice-president of the Medical Society of the State of New York. For the last twenty years of his life he specialized in surgery and by his skill had been recognized as the leading surgeon of Long Island. His genial disposition and affable manners won for him a host of friends who mourn his loss.

At a special meeting of the medical staff of Mercy Hospital, held on April 27, 1920, the following resolution was unanimously adopted:

"WHEREAS, As God, in His infinite wisdom has seen fit to take from our midst our esteemed friend and colleague, Louis Nott Lanehart, and

"Whereas, He has been the president of the medical board of the Mercy Hospital from its inception and foremost in promoting the interest of the hospital and the profession, and

"Whereas, Through his proficiency as a surgeon and through his interest in all branches of medicine he had become the leader of the profession on Long Island; that on various occasions his ability had been recognized through his holding the following offices and appointments:

"President of the Medical Board of Nassau Hospital,

"First President of the Associated Physicians of Long Island,

"President of the Medical Staff of Belmont Hospital,

"President of the Medical Staff of Mercy Hospital,

"President of the Queens-Nassau Medical Society,

"Vice-President of the Medical Society of the State of New York,

"Health Officer of the Town of Hempstead,

"Member of the New York Academy of Medicine,

"Consulting Surgeon to the Babylon Hospital.

"Therefore, be it

"Resolved, That the members of the medical staff of Mercy Hospital hereby express their sense of loss and extend their condolence to the family of our late colleague; be it further

"Resolved, That a copy of these resolutions be spread on the minutes of the medical board and a copy be sent to the family of Doctor Lanehart, and also published in the local newspapers.

"FRANK T. DE LANO,

"AARON L. HIGGINS,

"ARTHUR D. JAKES,

"DAVID S. DOOMAN,

"Committee on Resolutions."

Current Medical Literature

NEW YORK STATE MEDICAL LIBRARY.

RECENT ACCESSIONS.

Allen, B. J. Crusade of compassion for the healing of the nations. 1919.
American academy of ophthalmology and oto-laryngology. Transactions.
v. 24. 1919.

Chapin, H. D. & Pisek, G. R. Diseases of infants and children. 1919.
Gilbreth, F. B. Fatigue study. 1919.

- Great Britain. Local government board. Reports on public health and medical subjects. 1909 to date.
- Great Britain. National health insurance. Medical research committee. Special reports. No. 1-48. 1915-1920.
- Griffith, J. P. C. Diseases of infants and children. 2 v. 1919.
- Hazen, H. H. Syphilis. 1919.
- League of Red Cross Societies. Proceedings of medical conference, Cannes, France. 1919.
- Macnamara, N. C. Human speech. 1909.
- Mummery, J. H. Microscopic anatomy of the teeth. 1919.
- Osnato, Michel. Aphasia. 1920.
- Pappenheim, Artur. Morphologische hämatologie. Die zellen des normalen und pathologischen blutes. 1919.
- Rockwell, A. D. Rambling recollections. 1920.
- Schaeffer, J. P. The nose, paranasal sinuses, nasolacrimal, passageways and olfactory organ in man. 1920.
- Sluder, Greenfield. Concerning some headaches and eye disorders of nasal origin. 1919.
- Starling, E. H. Feeding of the nations. 1919.
- Stewart, H. E. Physical reconstruction and orthopedics. 1919.
- Verdalle, H. La Bourboule, station thermale, station de climat. n.d.
- Wallace, J. S. Occasional papers on the prevention of some common diseases in childhood. 1912.
- Waldron, W. H. Army physical training. 1919.
- Warthin, A. S. and Weller, C. V. Medical aspects of mustard gas poisoning. 1919.
- Watson, J. B. Psychology from the standpoint of a behaviorist. 1919.
- Whale, H. L. Injuries to head and neck. 1919.

NEW PERIODICALS.

- Medico-military review, for the medical department, U. S. Army.
- New York Tuberculosis Association. Bulletin.

ALBANY MEDICAL ANNALS

Original Communications

HEALTH WORK IN THE SCHOOLS IN NEW YORK STATE.

*Read at the Annual Meeting of the Medical Society of the State of
New York held in New York City, March 23, 24, and 25, 1920.*

By WILLIAM A. HOWE, M.D.,

State Medical Inspector of Schools, State Education Department, Albany, N. Y.

Special Lecturer, Albany Medical College.

Health work in the schools in New York State as it is being conducted at present, might well be classified under the following subdivisions:

1. School buildings and grounds.
2. Physical education.
3. Mental hygiene.
4. Mouth hygiene.
5. Nutrition.
6. School nursing.
7. Medical inspection in schools.
8. Health education.

The general administration of all of these health activities in the public schools in the State is under the direction of the State Commissioner of Education. Each subdivision of the work is administered by a specialist appointed for that purpose by the State Board of Regents upon recommendation by the State Commissioner of Education. The specialist in each line is held responsible for the administration of the work entrusted to his

or to her care. There is no part of the work that does not come into cooperative articulation with every other part of the general health program. The correlation of these various health activities is becoming more and more closely established and will in a brief time be fully accomplished. While adequate funds are not as yet available for the proper administration of the comprehensive health program of the State Education Department in the schools in the State, material progress is being made along definite lines, for the improvement of health and sanitation in our schools.

1. *School Buildings and Grounds.*

This division, as its name implies, has supervision of school buildings and grounds. All plans for the construction of new buildings or the alteration of old ones, must be submitted to the director of this division for examination, and must be approved by the Department before construction can go forward. Matters pertaining to heating, lighting, ventilating, seating, cleaning, and school grounds come under the direction of this division. While much is being accomplished in this special phase of our health work far more could be done, if sufficient funds were available with which to extend the work. Further provision for this purpose is greatly needed. Many of us have failed to appreciate fully the close etiological relation existing between school building conditions, and the health and physical fitness of teachers and pupils. Many of the acquired physical defects of school children are due to existing causes within the buildings in which the pupils are housed. It is the purpose of the Department to reduce these harmful conditions to a minimum, and to maintain a high standard of health equipment in school buildings for the safety and well-being of the children of the State.

2. *Physical Education.*

The Legislature of 1916 provided that all pupils above the age of eight years, in all elementary and secondary schools, shall receive physical training as a part of the prescribed course of instruction. A comprehensive course of instruction was adopted by the Regents of the University and has been in operation for

the past four years. The physical training movement in the schools of the State has been a great stimulus to other phases of health education or health work in the schools. It is the best financed of any part of our health work and is well organized. The State Education Department has a staff of 27 people to supervise and direct the work in physical education. There are 800 special teachers in physical education employed in the schools in the State.

Our State program of physical education has been particularly beneficial in bringing joy and recreation to the great mass of the boys and girls of the State. Health habits are emphasized, natural play is promoted. Refreshing and invigorating exercise tends to neutralize the degenerating effects of prolonged sedentary curriculum requirements. The educational values of play are recognized and physical education has come to be a part *of* and not a thing apart *from* the regular school curriculum. Games and play serve as attractive sources of educational development, promoting happiness, interest, obedience, correct posture and bearing, alertness, respect for authority, orderly conduct, courtesy, self-restraint, a sense of justice and duty, and a spirit of cooperation under leadership.

3. *Mental Hygiene.*

The work of Mental Hygiene was begun in 1918. It is under the direction of the mental diagnostician of the State Education Department. Associated with him is an expert to organize special classes for children who are found to be three years or more backward in mental development. Special attention will also be given to the supernormal or precocious child. Classes are now being conducted for backward children in 46 cities in the State while in 37 others classes are being organized. This feature of our health work in schools will meet an urgent educational need for thousands of children who in the past have been greatly neglected.

The value of segregation of the seriously retarded child in a special class is not only very great to such child, but also to the normal and very bright children who are held back by the

presence of the dull child in the regular class, and, last but by no means least, to the teachers whose burdens are lightened in every way by such segregation.

The movement to make three general divisions on the basis of mentality—dull, average (or normal), and very bright—with classes for each, is rapidly growing. It is a big step forward in school mental hygiene. Such classification should be made by means of psychometric tests. The State Department in its Mental Hygiene service is organizing and supervising this work, and as far as time allows is actually giving psychometric tests in schools that are not equipped to give their own.

The recognition of individual differences in school children and the application as far as possible of education suited to individual needs and capabilities is the great task for mental hygiene to perform. Indeed, herein lie both the present need and the future goal of all education.

4. *Mouth Hygiene.*

This feature of our health work is under the direction of the State Oral Hygiene Inspector. There are at present 30 school dental dispensaries in operation in the State exclusive of cities of the first class. Nearly 400 dentists have designated free dental hour service to deserving children in their offices in various parts of the State. Standard dental forms have been prepared and are in general use throughout the State. The Oral Hygiene Committee of the State Dental Society, The Rochester Dental Dispensary and others, have given generous aid in extending the work throughout the State. It is becoming more and more evident that a good dental equipment and a clean mouth are potent contributing factors to good health at any age, while a poor dental equipment and an unclean mouth are a distinct menace to health. Mouth hygiene is one of the biggest and most difficult health problems with which we have to deal among school children. Its solution must be sought in preventive dentistry. All agencies doing corrective work must teach preventive dentistry. We must so instruct our school children in preventive dentistry that they will acquire good dental habits early in life.

5. *Nutrition.*

No phase of our health work has grown so rapidly during the past two years as that relating to nutrition. The expert in charge of this work has stimulated State-wide interest in nutrition in both rural and urban communities. Hundreds of school districts are weighing and measuring their children every month with scales owned by the school and keeping a careful record of results. In many places, where children are found to be 10% or more under weight, nutrition classes are being formed in which individual attention is given to diet, to rest, to exercise and to the general physical condition of each undernourished child. A mid-morning lunch of milk and crackers is given to children who are 10% or more under weight. Hot school lunches are being served in many rural schools today and the movement is rapidly extending. Wonderful results have been accomplished by this plan.

Several careful and extensive nutrition surveys have been made during the past year in different parts of the State. The one in Erie county, including nearly all pupils in communities with less than 1,000 population, indicated that 20% of the children were 10% or more under weight. A similar survey of nearly 5,000 children in the schools of Syracuse gave 19½% as undernourished to the same extent. It will be noted that the percentage of undernourished children is practically the same in both rural and urban communities. It is becoming more and more evident that proper or well-balanced nutrition is the basic necessity of normal mental and physical growth. It is equally true that unbalanced or improper nutrition exerts its greatest evil influence both directly and indirectly on the health and physical fitness of growing children.

6. *School Nursing.*

There are approximately 225 school nurses under the general supervision of the State supervising nurse. These nurses are devoting full time to health work in schools. In addition to these there are nearly 500 other nurses in the State who are doing some health work in schools. Three years ago there were 100 school nurses in the State exclusive of cities of the first class. About 40 of our school nurses are employed in districts with a

population of less than 5,000. Twenty-two nurses are doing school nursing and physical training. In these cases special preparation in physical training is required of the registered nurse. All school nurses are required to be registered. It is desirable that they should have special training in public health administration. Definite instructions are issued to them as to their duties. They are required to submit monthly reports of their services and results obtained to the district or districts employing them. As the services of the school nurse are largely educational, we advise boards of education to employ full time nurses in districts having 1,000 or more children in attendance. In a community of this size there should be a full time public health nurse and a full time school nurse. They should assist each other in every possible manner and there will be plenty of work to keep them busy. By such a plan far better results will be accomplished in all forms of health work in the community.

Where only one nurse is available for all forms of health work, it is essential that all of her services relating to the schools shall be under the direction of the school authorities, to whom she must submit her reports. In such cases it is equally as essential that she should be under the direction of and responsible to the other agencies uniting in her employment while she is doing other than school work. In many communities the health work in schools would be a failure without the services of the school nurse, as no attention would otherwise be given to the details so essential to its success.

In her health work in the schools she cooperates with parents, teachers, medical inspectors, physical trainers, physicians, and dentists, and all others in the community interested in the health of children.

Her greatest success lies in her ability to give individual attention to children with physical defects and to see that proper attention or treatment is given to them. She must be tactful, intelligent, observant and thoroughly interested in her work.

7. Medical Inspection in Schools.

The State Medical Inspector of Schools has direction of this phase of the health work. To aid him there are two assistant

medical inspectors, and an instructor in hygiene. Much of the program of health work in schools, as presented in this paper, has been stimulated from the first by the provisions of the Medical Inspection Law, enacted in 1913. Our State Medical Inspection Law does not apply to cities of the first class, or to private or parochial schools. In many localities the parochial schools, by request, receive the regular health service, as furnished by the public school system. This plan is very satisfactory and should be encouraged.

About 700,000 school children and 37,000 teachers come under the provisions of the medical inspection law. There are approximately 1,000 school medical inspectors in the State, as at present card indexed in the Department.

Examinations for the Past Three Years

During the past three years, our medical inspectors and other physicians have made 1,276,602 physical examinations of school children. This is 75.1% of all the pupils registered in the schools from which reports were received during that period.

661,749 physical examinations were made in cities and villages with more than 5,000 population.

614,853 physical examinations were made in communities with less than 5,000 population, or in rural districts.

In cities and large villages 71.8% of the registered pupils were examined.

In rural schools 79.1% of the registered pupils were examined. 7.3% more of the registered pupils were examined in the rural schools than of those in the cities.

Defects Found

458,855 physical defects were found and reported to us from cities and large villages.

527,472 physical defects were found and reported to us from rural schools.

The percentage of defects found, in relation to the number of pupils examined, was, in cities, 69%, and in rural schools 85%.

Defects Treated or Corrected

In cities and large villages 154,833, or 33.7%, of all defects reported were treated or corrected.

In rural communities 113,816, or 21.5%, of all defects reported were treated or corrected.

12.2% more defects were corrected in cities than in rural sections.

Summary of Results for Three Years

Physical examinations made	1,276,602
Percentage of registered pupils examined.....	75.1
Number of defects reported	986,327
Number of defects treated	268,649
Percentage of all defects treated.....	27.2

These results, especially in corrective work, have been made possible by the generous cooperation of hundreds of the best men and women in the medical and dental professions in the State, by special opportunities extended to deserving cases by hospitals and dispensaries in every locality, by a splendid spirit of cooperation by other State departments, and by many agencies interested in the betterment of the health and physical fitness of children.

8. *Health Education.*

Health education is placed last in the list of activities in health work in schools, as it is regarded as the basic part of the whole program and is the most potential and far-reaching in its influence on results to be accomplished.

The chief aim of school health service is the prevention and correction of such physical defects as may interfere with the child's normal progress in school both mentally and physically. It is the purpose of the Education Department, through its various agencies, to give to every child a thorough education and training in all matters pertaining to physical and mental health, and the means by which health is to be attained and preserved. In other words, as soon as the child's formal education begins he must be taught the things that pertain to his personal health and

the sanitation of his surroundings, and this teaching must continue throughout his school career. He must learn by doing—that is, he must practice the precepts taught in the school in order that he may form and develop health habits that shall guide him in wholesome living and thinking. In his progress through school he must receive school credits for health achievement, as well as for achievement in his other courses of study.

This work has been going on for several years, stimulated by health clubs and parent-teachers' organizations in our schools. Our medical inspectors and school nurses have aided by giving lectures and demonstrations in the schools, and our teachers of hygiene and physiology, as well as our physical trainers, have begun to stress the importance of health habits and health achievement in general.

All the health agencies participating in health work in the schools will be closely cooperative in presenting a progressive course of health education and health achievement, beginning with the first school year and continuing through the high school. In carrying out this plan it will be necessary to give increased attention to health education in our normal schools and teachers training classes, to the end that our teachers may be thoroughly equipped for this branch of education in whatever grades they may later be required to teach. This phase of our work is making progress in our normal schools.

It must be evident to all physicians that health education is the *first* duty of our health work in schools and not the *last*; that it is not the least but the greatest instrument in our hands for protecting the children of school age and preparing them for long and useful lives after leaving school. It is also a function belonging strictly to the schools; one that cannot be delegated successfully to any other agency. The public has always looked to the schools to train the young intellect. It is beginning to hold the school responsible for the training of the young body also, and expects the school to return the child to society at the end of eight, ten or twelve years, not merely as sound and healthy as when it entered school, but, if possible, sounder and healthier and with a better prospect of long life and usefulness.

The child that has learned the fundamental principles of right

living often becomes a teacher of its parents and brings about a reformation in its home. Health education beginning in the school is propagated not only to the home but to the ends of the earth through the energy of the young enthusiast. If school children accept our teachings, everybody will come under the influence of the health propaganda eventually.

Let us bear in mind one of the mottoes of the State Education Department: *First health, then wisdom; healthy children make a strong nation.*

SUGAR.

Read at the Annual Meeting of the Medical Society of the State of New York held in New York City, March 23, 24 and 25, 1920.

By FRANK VAN DER BOGERT, M. D.,

Schenectady, N. Y.

Instructor in Pediatrics, Albany Medical College.

In view of the very rapid increase in the consumption of sugar during the past fifty years it seems rather surprising that so little space in medical literature has been devoted to its value and limitations as a food in later childhood. Textbooks on Pediatrics deal with it simply as a food for infants and writers on diet, as a rule, refer only to its nutritive value and ease of assimilation. Recently through the lay press has come a warning as to its dangers and the suggestion that the shortage of the past few years may have been of real value to the race from the standpoint of public health. Since children are perhaps the largest consumers this danger seems worthy of the consideration of those of us who are interested in their development.

The manufacture of sugar dates back many centuries; its price, however, was prohibitive even as late as the commencement of the nineteenth century, before which time it was very little used by the poor, being a luxury almost beyond their reach. Prior to the eighteenth century it was looked upon as a drug and in 1700 the total consumption in Great Britain, now the largest consumer, was only about 10,000 tons. One hundred years later this had risen to 150,000 tons and in 1885 one million tons were eaten. The total world production in 1914 was 21,000,000 tons.

The history of sugar production and consumption prior to 1700 is of more interest than importance. Sugar itself is not mentioned by Herodotus, which means that it was probably not known in Egypt or Persia 400 or 500 years, B. C., still something is said which makes one believe that it was produced, for he says of the Gyzantes "among whom honey is made in large quantity by bees but in much greater quantities still it is said to be made by men." It was known as a rarity with the Greeks and Romans and the supply came from India. According to Morey the only sweets of the Athenians were in the form of fruits and wines. Crusaders brought it to European countries, it having first come to Western Asia through the Arabs who got it in East India and China. Marco Polo refers to its manufacture about 1280, A. D., and it was sold in London in 1482 at \$2.75 a pound. In 1810 Napoleon I offered a prize of one million francs for the best method of obtaining sugar from the beet and the literature of the time contains a humorous caricature published in 1811 ridiculing the Emperor and his son, the Little King of Rome. Napoleon is represented as sitting in the nursery squeezing a beet into a cup of coffee and near him is the King of Rome putting another to his mouth, his nurse telling the youngster to "Suck, dear, suck, your father says it's sugar." Napoleon's attitude gave a great impetus to the industry.

Before sugar was a common commercial article honey was generally used to sweeten foods. Honey has been used as a food from earliest times and is generally conceded to be wholesome, but its comparative scarcity is evidenced by the fact that it was sent as one of propitiatory offerings by Jacob to his unrecognized son, the chief ruler of Egypt, and that a land flowing with milk and honey was apparently worth striving for.

Dr. W. R. Whitney, to whom I am indebted for many of the above references, suggests that it looks very much as though the race is being partly killed off in an attempt to produce a type of immunity against sugar and that we would hardly expect this immunity to be first class in a couple of centuries.

It is safe to assume that the present great popularity of sugar is as much due to its pleasant flavor and comparatively low price as to its food value. To quote from *The Farmers' Bulletin* issued

upon this subject by the United States Department of Agriculture: "It may almost be said that people eat as much sugar as they can get, the consumption in different countries being, in general, proportional to their wealth." In normal times Great Britain consumes ninety-six pounds per person annually and this country disposes of one-fifth of the total output of the world. Candy factories all over the United States are turning out tons upon tons of candies in response to an ever growing demand for sweets and figures showing the growth of the candy industries have become attractive bait for the prospective investor. Last October Mr. Zabriskei, President of the Sugar Equalization Board, told the Senate sub-committee that during the first nine months of 1919 the American people consumed 300,000 more tons of sugar than normal and suggested prohibition as the principle cause since those accustomed to alcoholic drinks have turned to soft drinks, candies and confections. The February *American Review of Reviews* puts the 1919 increase over 1918 at perhaps one half million tons which was the normal annual increase of the whole world. According to the *New York Times* of February last, sweet eating has grown so rapidly in this country as a substitute for indulgence in alcohol that much of the wreckage of the liquor business has been salvaged for the production of candy, ice cream and syrup. The Bartholmew Brewing company at Rochester has been turned into a big wholesale candy factory, the Harvard Brewing company of Massachusetts into a chocolate factory and the Jacob Rupert and other breweries are making a malt syrup which forms a basis for candy and confections. These facts suggest habit rather than necessity and make us rather wonder at the regret expressed by Lorand in his "Health Through Rational Diet" that ice cream soda had not been introduced into his country. Lorand is inclined to consider the craving for sweets for which children and young girls have a marked predilection as a kind of instinct which should not be denied and will have a beneficial effect, and seems to forget that it tends to establish the most pernicious of all dietetic habits, between meals feeding. The substitution of tobacco by sweets is exceedingly common. Leonard Guthrie, writing of the evils of tobacco in his "Functional Nervous Disorders of Childhood,"

says that we all agree that smoking is bad for little boys. . . . They spend their money on cigarettes instead of on sweets, which practice, however, may be more damaging to the sweet stuff trade than it is to them."

With most of us a dinner, however otherwise complete, is not likely to satisfy unless followed by a dessert. The observation of Garner upon monkeys that they prefer acid fruits when in the wild state but when in captivity, soon become enthusiastic about sweets also points to sweet eating as a habit. There can be no question as to the important place which carbohydrates must always hold in the diet since with fats they furnish a very large proportion of the energy required, nor can we disregard the value of sugar itself when taken in moderation and with regularity and, under certain unusual conditions, in large amounts. There seems, however, to be no proof that sugar is absolutely essential after the period of infancy, when its presence in considerable amount in the milk of the nursing mother points to its necessity in the early months before the digestive processes have become able to convert starches, but, after this digestive ability is established, there is every reason to believe that the effort required in the conversion of starches is of benefit to the development and maintenance of the digestive processes and that added sugar tends to impair these functions.

The arguments advanced in favor of the consumption of sugar in large amounts are: its high caloric value, its prompt assimilation, and the craving for sweets especially manifest in childhood. The first two apply only to infants and to those adults employed in active out of door work or under conditions of great physical strain. Lumbermen and farmers who work hard in the open air are cited as examples of those who are benefited by the consumption of large quantities of sweets. Dietary studies carried on in the lumber camps of Maine showed that sugar of all sorts supplied an average of ten per cent. of the total energy of the diet. Candy supplied to armies in the field is believed to increase their efficiency. Certain rowing clubs in Holland have reported very beneficial results with the use of large amounts of sugar in training. Pfluger who has devoted much time to the study of carbohydrates says that undoubtedly sugar in the blood

is heavily drawn upon during violent exercise; hence the longing for it in a form that can be rapidly assimilated.

Its use by mountain climbers is well known. The Swiss guide considers lump sugar and highly sweetened chocolate an indispensable part of his outfit. The value of sugar in cold climates, particularly where foods containing starch are not available, must be conceded, and in the outfit of polar expeditions sugar is now given a most important place, the loss of life in a recent expedition having been directly attributed to the fact that two members of the party failed to find the sugar left for them. Great value is set upon sweets in India and it has been said that the employer who fails to furnish the native laborer with the large amount of sugar he desires must expect to lose his workman. This same might be said, however, of the employer of the Canadian Guide should he refuse to furnish tobacco.

The craving for sweets, to which so much importance is attached by many writers, can, in most instances, hardly be considered of more value than the craving for alcohol. Tissue hunger has long been distinguished from normal appetite and may depend upon an abnormal state of the digestive tract which inhibits assimilation. Children who show symptoms of inherited weakness of the thyroid gland have a very decided craving for large quantities of sweets. Craving can be relied upon as an index of body needs only when man reverts to his natural state.

Any etiological connection between the increase of sweet eating in this country and the large number of physical defects and functional disorders, a realization of which has come to us through a more thorough examination of school children and young men, can be but problematical. We know only that these defects exist at a time when general errors in diet are exceedingly common and the natural inference is that some causal relationship exists. As suggested by Leonard Williams, "Inasmuch as food is agreeable it is safe to assume that such dietetic errors as are habitually committed arise from excess rather than deficiency of its consumption." Sugar, as the most pleasant, must be considered the most dangerous.

Dietetic errors certainly have their effect in the production of gastro-intestinal disorders so prevalent in children, and many

of the functional nervous disorders of childhood can be directly traced to toxemia of intestinal origin. The most frequent dietetic errors in childhood are carbohydrate excesses and sweets are in great part the determining factor in carbohydrate excess.

Of present day physical defects of childhood, stand out most prominently, dental caries, adenoids and hypertrophied tonsils. Infection plays its part in the production of these defects, to be sure, but infection can only occur where resistance is lowered. There can be little question as to the influence of present day sweet eating upon dental decay. Dietetic histories of cases of marked dental caries in young children must be considered conclusive, showing as they do almost invariably, the most lavish ingestion of sweets. Westlake in his book on "The Teeth to the Twelfth Year," says that the diet must be of natural, pure food, those not denatured by manufacturing processes. The teeth probably suffer in three ways from sugar excess, they have been deprived of advantages gained by the milling process of obtaining necessary sugar from starch. Sugar forms a most satisfactory medium for the growth of acid producing bacteria, and the gastro-intestinal derangement subsequent to excessive sweet eating interferes with the assimilation of bone forming materials from the food.

It is very probable that we were intended to chew our starchy food sufficiently to obtain the satisfaction of its pleasant taste by conversion to sugar in the mouth. Brackett in his "Care of the Teeth" speaks of the deplorable condition of the teeth in a community where a considerable part of the diet was made up of a combination of poor bread and molasses, lacking in nutritional elements and readily fermentable.

I have personally felt for many years that adenoids and hypertrophied tonsils are at least indirectly due to carbohydrate excess and that sugar plays a most important rôle in their development. My case histories almost universally point to such a causal relationship and I have come to believe that recurrences after operation can be prevented in practically all instances by elimination or limitation of sweets in the diet. Very recently Dr. Harry Campbell read before the Section of Diseases of Children of the Royal Society of London a paper in which he assumes the

cause of adenoids to be a toxæmia of intestinal origin brought about by a flooding of the bowel by starch which has undergone little, if any, salivary digestion, and suggests as a factor, the enormous increase in sugar consumption of late years. Adenoids are said to be more common among the British than any other people. Sir William Osler thought that there was more mouth breathing in England than in any other country. Great Britain is the largest consumer of sugar.

To effectively increase resistance against these and other forms of infection we must alter some of our dietetic habits many of the most pernicious of which can be justly attributed to the palatability of sweets. Sugar water has been, and still is, in the minds of the unenlightened the ideal pacifier. Sweet eating practically always means between meals eating and food made tempting by the addition of sugar encourages overeating.

The nutrition of children in orphan asylums of New York State, where meals are regular and supervised, where between meals feeding is eliminated and sugar ingestion controlled, is known to be better than outside these institutions. The Children's Home of Schenectady with forty-five inmates has just completed a year during which there has been no real illness requiring the services of a doctor. Few private families can show a better record with one-tenth the number of children.

Without wishing to decry any of the pleasures of the table I would plead simply for a more moderate use of a food which has possibilities for harm.

SURGICAL TREATMENT OF HYPERTHYROIDISM—
RELATION EXISTING BETWEEN THE AMOUNT
OF GLAND REMOVED AND THE PERMA-
NENCY OF RELIEF.

*Read at the Annual Meeting of the Medical Society of the State of
New York held in New York City, March 23, 24, and 25, 1920.*

By GEORGE E. BEILBY, M. D.,

Instructor in Surgery, Albany Medical College.

The surgical treatment of exophthalmic goiter has pretty generally won the recognition which it deserves. We still occasionally hear a dissenting voice on the part of physicians. This is due either to a lack of knowledge of the results that are being obtained or to a strong prejudice which no amount of proof can overcome.

It is true that a decade ago the results were not all that could be desired, but to-day in the hands of experienced operators the operative mortality will compare favorably with other major operative procedures. Several factors have contributed to this marked lowering of the mortality rate. Of first importance has been the careful preparation of patients and the selection of time for the operation. Of equal importance in my experience has been the employment of an anaesthetist particularly skilled in the management of these cases and an improvement in technic whereby the time required for the operation has been materially shortened.

This phase, then, of this important question seems to have been thoroughly and conclusively covered. No very strong objections can now be raised against the surgical treatment of exophthalmic goiter on the basis of the primary or operative mortality. A question of extreme importance, however, is constantly arising and must be answered. Will the operation which you have done or propose to do in a given case afford permanent relief? In order that this question may be answered with some degree of accuracy I have made a careful analysis of 77 cases operated upon by me at the Albany Hospital for the relief of exophthalmic goiter or for definite symptoms of hyperthyroidism. These do not include the cases of simple hypertrophy, tumors or cysts.

In 13 cases of this series the operation was done in stages, that is, at the primary operation only one lobe or a portion of one lobe and the isthmus were removed. In the remaining 64 cases a complete operation was done at one time. Of the 13 stage cases, 4 had been operated upon once before coming into our hands, so that, in only 9 cases did we undertake this method as the procedure of choice.

In the first place in reference to the "stage operation:" it has been my experience that it is difficult to induce patients to submit to more than one operation for the relief of this condition. If they are appreciably benefited they are inclined to accept this as the best result that can be obtained, and if no marked improvement occurs they become discouraged and skeptical of operative relief. All of these cases, however, after a sufficient amount of the gland has been removed, have been either completely cured of toxic symptoms or greatly benefited. Of the remaining 64 cases in which a complete operation was done, that is, a bilateral subtotal excision, there has been no evidence of a hypertrophy of the remaining gland tissue and no return of symptoms. These results have compelled me to revise somewhat my methods and ideas as well with regard to the operative technic as to the management of these cases. I find that in the past two years during which time one-half of these patients were treated, no cases were selected for the stage operation and there has been no recurrence after a single subtotal excision.

There seems to be still a rather prevalent opinion that the desirable method of treatment is the removal of one lateral lobe, or at most, one lobe and the isthmus of the gland, even in patients that are excellent operative risks: that the taking away of more than one-half or two-thirds of the thyroid gland is not compatible with the life and health of the individual, and that the removal of one lobe is all that is necessary to effect a complete cure. Experience, I think, has proven that patients derive little or no lasting benefit from such an operation. If any improvement is observed it is, at the most, of short duration, usually from six months to one year, during which time an hypertrophy of the remaining gland tissue takes place, compensatory

in character, until the total amount of gland tissue present is practically the same as before any operation was undertaken.

It is a well recognized fact that many cases of an extreme toxic nature are unable to withstand as extensive an operation as is required to prevent a recurrence of symptoms without some preliminary treatment. Herein lies, to a large degree, the explanation of the material improvement that has been shown in the mortality rate. As to just what form of preliminary treatment affords the greatest benefit, opinions are somewhat at variance.

In my hands ligation has not been altogether satisfying. Even where done under local anaesthesia it is frequently followed by a severe reaction and the improvement, when any is noted, does not reach its maximum until two to four months have elapsed and then is of comparatively short duration. This method necessitates two operations and on account of the difficulty frequently encountered in inducing patients to return for the second operation, its objections are obvious.

Repeated injections into the gland of boiling water as first suggested by Porter, with the purpose in view of rendering areas of the gland temporarily inactive, has met with some favor. Such injections, however, are not entirely devoid of danger. They must be repeated at intervals over a period of several weeks. In some instances decided benefit has been observed so that as a measure affording temporary relief it is worthy of consideration. Our clinical observations and the examination later of gland tissue thus injected, would seem to prove that if there is an actual destruction of cells following the injection, complete regeneration occurs after a short period, so that while the method may give temporary relief it should not be accepted as a proved therapeutic measure. In the preparation of these severe toxic cases for operation our own preference has been to combine rest in bed with local and constitutional treatment according to the indications presented by the individual case, until the acute toxic symptoms subside.

I would repeat with reference to the stage operation, it has been my observation that where only a portion of the gland is removed and the circulation of one lobe, for instance, is left

undisturbed, the reaction which follows is often more severe than where a subtotal excision is done, so that I believe that a partial resection of the gland is not a desirable procedure, and should only be done when difficulty is encountered at the operation or when a prolongation of the anaesthetic might endanger life.

In the light of our present day experience I think we are able somewhat to revise our ideas with reference to the total amount of gland tissue which is necessary to sustain life and health. I believe that in the past the tendency has been, in operating for the relief of exophthalmic goiter, to leave behind too much rather than too little thyroid tissue. It would be very desirable indeed if some accurate means could be devised to determine the exact amount of such tissue required, but so many factors enter into the determination of this matter that it would be difficult, if not impossible, to attempt to formulate any rule which would serve as a useful guide in determining the exact amount of gland tissue which should be left in a given case. Again I believe that not so much depends upon the total amount of tissue left as on its distribution, and blood supply. For instance if one-third or one-fourth of the total amount of gland tissue remains as a portion of one lobe with its more or less undisturbed blood supply, the chances are altogether in favor of an hypertrophy of this portion of the gland tissue taking place and we have in due time a return of toxic symptoms. If on the other hand this same amount of gland tissue is left as small bits of tissue distributed throughout the entire site of the gland there is no likelihood whatever of hypertrophy of these pieces of gland tissue taking place. In none of my cases operated upon in such a way that only portions of tissue were left attached to the posterior capsule has there ever been any evidence of hypertrophy or return of symptoms, even though an estimated one-fourth of the entire gland tissue has been left behind.

It is my custom in controlling the blood supply and removing the gland to pass all ligatures through gland tissue as close to the posterior capsule as possible and in this way stumps of tissue are left which are completely tied off and deprived of their blood supply. These bits of tissue either atrophy or degenerate and are discharged later with the drainage. It seems evident then that in removing a gland in this manner the amount of tissue left

which remains viable is in reality only a small fraction of the total amount present in the beginning. I have variously estimated this as one-sixth to one-tenth of the entire hypertrophied gland. Notwithstanding so complete a removal has been done, no case has presented the slightest evidence of hypothyroidism or of parathyroid deficiency.

In conclusion I would emphasize the following:

1. The removal of one lobe of the thyroid gland in exophthalmic goiter may give temporary relief but will not effect a cure.

2. If only a portion of one lobe is left and its blood supply is undisturbed, its hypertrophy and a recurrence of symptoms may be expected.

3. With careful preparation and selection of time a complete operation may safely be done in most cases at one time.

4. Where sufficient gland tissue is removed the toxic symptoms promptly and completely disappear.

5. This relief is a permanent one if the gland tissue which remains is not left in a condition such that hypertrophy may take place.

6. That the experience in a sufficient number of cases justifies the belief that with the removal of the amount of gland tissue referred to, no symptoms of thyroid or parathyroid deficiency need be expected.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

* DEATHS FOR MONTH OF APRIL, 1920.

Consumption	19	Broncho Pneumonia	1
Typhoid Fever	0	Bright's Disease	9
Scarlet Fever	0	Apoplexy	11
Whooping Cough	2	Cancer	9
Diphtheria	0	Accidents and Violence	6
Influenza	2	Deaths under 1 year	16
Measles	0	Deaths under 70 years.....	37
Diarrheal Diseases	2	Death rate	15.02
Pneumonia	10	Death rate less non-residents	12.38

Deaths in Institutions.

	Non-Res.	Res.		Non-Res.	Res.
Albany Hospital	8	8	Maternity Hospital	1	4
Albany Hospital T. S..	1	2	St. Margaret's House ..	3	0
Albany Co. Hospital ...	3	1	St. Peter's Hospital ...	1	8
Child's Hospital	0	1	Public Places	0	3
Homeopathic Hospital .	3	8	Dominican Convent	0	1
Little Sisters of the Poor	0	4			
Hospital for Incurables.	1	0		21	40

Births 202 Still Births 8

DIVISION OF COMMUNICABLE DISEASES.

Typhoid Fever	4	Whooping cough	40
Scarlet Fever	29	Tuberculosis	39
Diphtheria and Croup.....	7	Mumps	56
Chickenpox	29	Pneumonia	34
Smallpox	1	Influenza	22
Measles	9		
German Measles	0	Total	270

Number of days quarantine for scarlet fever:

Longest..... 30 Shortest..... 30 Average..... 30

Number of days quarantine for diphtheria:

Longest..... 23 Shortest..... 19 Average..... 21

Fumigations:

Rooms..... 266 Buildings..... 49

Milk bottles disinfected 983

Communicable Diseases in Relation to Schools.

	Reported D. S.F. M.
Public School No. 5.....	3 ..
Public School No. 12.....	3 ..
Public School No. 14.....	1 1 ..
Public School No. 15.....	1
Public School No. 16.....	2 ..
Public School No. 18.....	1 ..
St. John's School	1 ..
Christian Brothers' Academy	1 ..
St. Ann's School	2 2 ..
St. Vincent De Paul's School.....	3 ..

MISCELLANEOUS.

Cards posted for communicable disease	25	Vaccination dressings	74
Cards removed	48	Children examined for employment certificates	21
Notices served on schools..	170	Number of employment certificates issued	20
Notices served on stores and factories	11	Taking specimens of blood for Wassermanns	3
Postal card returns sent to doctors	25	Taking smears for Gonococci	38
Postal card returns received from doctors	48	Miscellaneous investigations by Seventh District physician	57
Inspections and reinspections	40		
Vaccinations	56		

Tuberculosis.

Living cases on record April 1, 1920.....		808
Cases reported:		
By card	27	
Dead cases by certificate.....	12	39
		<hr/>
		847
Dead cases previously reported	7	
Dead cases not previously reported.....	12	
Removed	23	
Died out of town	1	
Recovered	0	
Unaccounted for	0	43
		<hr/>
Living cases on record May 1, 1920.....		804
Total tuberculosis death certificates.....		19
Non-resident deaths:		
Albany Hospital Camp	2	
C. F. L. Pavilion	0	
County Hospital	1	
St. Margaret's House	1	
City at large	0	4
		<hr/>
Resident deaths		15
Visits to cases of tuberculosis		124
Miscellaneous visits		22
Visits to physicians		36

LABORATORY REPORT.

Diphtheria.

Initial Positive	14	Unsatisfactory	14
Initial Negative	265		
Release Positive	14	Total	341
Release Negative	34		

Sputum for Tuberculosis.

Positive	65	Unsatisfactory	0
Negative	134		
		Total	199

Widals.

Positive	4	Unsatisfactory	1
Negative	22		
		Total	27

Wassermann tests (positive, 59)	416	Gonorrhoea Examinations (positive, 10)	112
Milk Analyses	132	Miscellaneous Examinations.	23
Water Analyses	0		
Pathological Examinations .	0	Total Examinations	1250

HEALTH PHYSICIANS' REPORT.

Cases assigned	52	Calls made	121
----------------------	----	------------------	-----

DIVISION OF SANITATION.

Complaints	86	Reinspections	135
Inspections	90	Plumbing	23
Plumbing	30	Sanitary	112
Sanitary	60		

HEARINGS.

Hearings	1	Cases heard	1
----------------	---	-------------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	99	Blue or red	1
Old Houses	54	Peppermint	2
New Houses	45	Water test	16
Permits issued	81	Houses examined	16
Plumbing	72	Re-examined	47
Building	9	Valid	9
Plans submitted	7	Without cause	7
Old buildings	4	Violations	0
New buildings	3	Plumbers' license plates fur-	
Houses tested	19	nished	2
Smoke	0		

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	15	Cats removed	90
Dogs removed	70		
		Total	175

DIVISION OF MARKETS AND MILK.

Public market inspections ..	23	Milk cans condemned	0
Market inspections	119	Lactometer readings	72
Fish market inspections ...	14	Temperature readings	72
Fish peddler inspections ...	0	Fat tests	46
Slaughter house inspections.	0	Sediment tests	80
Rendering establishment in-		Chemical tests	0
spection	4	Cows examined	0
Pork packing house inspec-		Cows quarantined	0
tions	4	Cows removed	0
Hide house inspections	0	Complaints investigated	3
Milk depots inspected	19	Dealers' permits issued	23
Stores inspected	76	Storekeepers' permits issued	114
Dairies inspected	0	Bob veal condemned.....lbs.	350
Milk cans inspected	247	Beef condemned	1800

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—REPORT FOR MAY, 1920.—1. Number of new cases this month, 288: Classified economically: Free: Bed cases, 41; prenatal, 8; dispensary social service, 53; tuberculosis (positive), 19; tuberculosis (supervision), 5; hospital social service, 21. Paid: Limited means—bed cases, 63; metropolitan—bed cases, 62; metropolitan—prenatal, 12; industrial—bed cases, 3; industrial social cases, 1. Cases carried over from last month, 822; nursing cases, 68; prenatal cases, 50; dispensary social service, 4; tuberculosis (total), 307; hospital social service, 50; venereal, 79; industrial, 264. Division of nursing cases: Medical, 108; surgical, 5; obstetrical, 45; prenatal, 25; babies, 34; maternity, 5; confinements, 29; miscarriages, 3.

2. *Visits of Nurses*.—All departments, 2,029; for nursing care, 1,306; prenatal instruction, 79; tuberculosis (sup. & Instr.), 127; venereal disease (Instr.), 44; hospital social service, 71; general social service (inc. disp.), 266; for other purposes, 136.

3. *Source of Nursing Cases*.—Metropolitan agents, 46; doctors, 63; nurses, 2; dispensary, 8; family or friends, 46; other sources, 21.

4. *Disposition of Nursing Cases*.—Discharged recovered, 50; discharged improved, 79; discharged unimproved, 34; discharged dead, 13; discharged to other care, 34; carried, 122. Disposition of other cases: Prenatal: To maternity and other care, 30; carried, 52. Dispensary social service: To dispensary care, 53; carried, 4. Hospital social service: Discharged home, 11; discharged dead, 4; discharged to dispensary, 4; discharged to

Pavilion "F," 0; discharged lost, 1; carried, 51. Venereal: Discharged, 6; carried under care, 31; carried under supervision, 44; carried under care at the House of Good Shepherd, 16. Tuberculosis: Discharged dead, 24; carried, 307. Industrial: Discharged (soc. or bed cases), 3; carried, 261.

5. Number of cases carried over into June, 820; nursing, 83; prenatal, 39; dispensary social service, 4; hospital social service, 51; venereal, 75; tuberculosis, 307; industrial, 261.

6. *South End Dispensary Report*.—Number of clinics, 93; surgical, 10; medical, 9; gynecological, 9; prenatal, 4; eye and ear, 17; venereal, 10; Nerve, 5; nose and throat, 9; skin, 5; children, 7; lung, —; children's lungs, 4; clinics with doctor attending, 89; clinics without doctor attending, 4; number of new patients treated, 185; number of old patients treated, 628; total number of patients treated, 813.

7. *Industrial Dispensary*—at *Huyck's Mills*.—Number of clinics held, 21; number of new cases treated, 45; number of old cases treated, 219; total number of cases treated, 263; number of physical examinations, 12.

PERSONALS.—Dr. RALPH B. POST (A. M. C., '11), who practiced in Ravena, N. Y., after retiring from the Albany Hospital service, has returned to general practice at Ballston Spa following his discharge from military service.

—Dr. A. M. RABINER (A. M. C., '16), after military service of two years at home and abroad, has now settled for general practice at 354 South Third street, Brooklyn, N. Y.

In Memoriam

FREDERICK RANDALL GREENE, M. D.

Dr. FREDERICK RANDALL GREENE, who died at his home, 180 Second street, Albany, N. Y., June 6, 1920, was born in Petersburg, Rensselaer county, June 8, 1862, and was the son of Warren S. and Celia D. Greene. Dr. Greene received his education in the district school and graduated from the Hoosick Falls High School at the age of eighteen. He was graduated from the Albany Medical College in 1884. After practicing medicine in his home for fifteen months he moved to Albany and took the office of Dr. Hayes, 626 Central avenue, October 6, 1886. He married Miss Elizabeth Blackburn of Albany. He later purchased a lot at Central avenue and Manning boulevard, building a house where he lived for thirty years, having one of the largest practices of any physician in Albany. On account of ill health he retired and moved to Bennington, Vt., expecting to regain his health. He lived there one year, returning to Albany May 13, 1920, with the intention of resuming practice, but his health rapidly failed. He leaves his son, F. R. Greene, Jr., one brother, F. G. Greene, of Chicago, Ill.; two sisters, Mrs. B. G. Ladd, of Hoosick Falls, and Mrs. Minnie M. Herring, of Petersburg.

ALBANY MEDICAL ANNALS

Original Communications

A COMPARATIVE STUDY OF THE DIAGNOSIS OF SPECIMENS FROM CASES OF TYPHOID FEVER, TUBERCULOSIS AND DIPHTHERIA IN DIF- FERENT LABORATORIES OF NEW YORK STATE.

Read at the Annual Meeting of the State Medical Society, April, 1920,

BY JOSEPH S. LAWRENCE, M. D.,

*Former Bacteriologist Pathologist, Division of Laboratories and Research, State
Department of Health,*

AND

ELLEN FINLEY,

Former Assistant Bacteriologist.

Accurate methods of diagnosis are a prerequisite to a successful system for the control of communicable diseases. Public health laboratories can render very valuable assistance to the physician in arriving at a correct diagnosis but it is not sufficient for a medical practitioner to know that there is a laboratory at his command; he must be confident that its work is accurate.

A difference in reports on the same specimens from different laboratories does not necessarily indicate variation in precision of work nor does it follow that one or the other is entirely wrong. Bacteriology is still in the stages of development. A standard technique, slowly crystallizing out of the work of a large number of individual laboratories, has indicated that many times a dissimilarity in reports is due in large measure to the employment

of a different terminology or to a variance in the degree of delicacy in interpreting findings. These differences frequently characterize the bacteriologist; to the busy physician they are often confusing and annoying. Uniformity of methods employed in examinations of specimens and wording of reports on results of examinations are imperative in order to secure the highest laboratory efficiency for public health officials.

In New York State there are more than thirty laboratories doing public health work. They may be divided according to their financial support into four groups: state, county, municipal and private laboratories. A number of them were started by physicians who consented to make some examinations in their offices for their brother practitioners. When Dr. A. B. Wadsworth became the director of the Division of Laboratories and Research of the State Department of Health, he prepared a simple outline of procedure for the more common laboratory examinations which all bacteriologists doing public health work were requested to adopt in order to secure uniformity of technique. Under this system the laboratory work of the State developed very satisfactorily and bacteriologists are able to confirm one another's findings and agree upon reports. To secure definite evidence of the efficiency of this system a general interchange of specimens was made in 1916, stained specimens from diphtheria cultures being prepared by Dr. Wadsworth and his associates and distributed among the various laboratories. Owing to difficulties developing as a result of confusion from many bacteriologists going into military service, the experiment was not, at that time, completed.

In 1918 this interchange of specimens was again undertaken, drops of blood taken from rabbits being immunized against typhoid bacilli were distributed with a request that they be examined for typhoid agglutination. Three rabbits were chosen because of the quality of the titre of their blood. One had a strength of titre that agglutinated in dilutions up to $1/320$, another agglutinated weakly at $1/80$, while a third showed clumping only in $1/40$. A fourth specimen was prepared from normal blood.

The outfit used consisted of two aluminum plates with a depression in the center of each. A drop of blood was let fall

into the depression in each plate and allowed to clot and to partly dry in the air. The specimens were then put into the cold room until mailed. With each specimen was sent the following report sheet and instructions:

Widal Reaction.

Technique to be observed:

"Specimens are to be diluted 1-10, 1-20 and 1-40, using either water or physiological saline solution. The dilutions are to be compared by color with standard dilution of known quantities of blood which have been dried and then diluted. Eighteen hour broth cultures are to be used. One drop of this culture and one drop of the 1-10, 1-20, 1-40 dilutions of dried blood are to be used making the final dilutions 1-20, 1-40, 1-80. The readings are to be made after one hour's incubation at 37° C." Report on accompanying diagram using X to signify agglutination, — no agglutination, and P partial agglutination.

Report	Dilutions		
	1-20	1-40	1-80
I			
II			
III			
IV			

Specimens were given to five bacteriologists in the state laboratory for examination at the same time that the other specimens were sent out. As the report sheets were received they were numbered and these numbers were chosen to designate the laboratories in the tabulation.

CHART I

Dilution	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	A	B	C	D	E
Specimen No. I	P	+	+	P	P	+	+	+	+	-	+	+	+	+	P	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	P	+	+	+	P	+	+	+	+	-	+	+	+	+	P	+	+	P	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	P	-	+	-	-	+	-	-	+	-	+	+	+	+	-	P	P	+	+	+	P	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Specimen No. II	-	-	P	+	-	+	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	P	+	+	+	+
	-	-	P	+	-	+	+	-	-	+	P	-	-	-	-	-	-	-	P	-	-	-	-	-	-	-	-	-	-	-	-	P	P	+	+	P	
	-	-	P	+	-	-	-	-	-	+	P	-	P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	P	P	P	P	
Specimen No. III	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
	+	+	+	+	+	+	+	+	+	P	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Specimen No. IV	-	-	-	+	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

A-E — Diagnosticians in State Laboratory at Albany

+ — Agglutination. P = Partial or slight agglutination.

- - - No agglutination.

The reports were numbered as they were received and these numbers are used to represent the laboratories.

Specimen No. I—Weak Positive.

Specimen No. II—Weak Negative.

Specimen No. III—Strong Positive.

Specimen No. IV—Strong Negative.—Normal blood.

A glance at the chart shows a most satisfactory uniformity in the reports. In all thirty-two laboratories reported. Specimen 1 was weakly positive, agglutinating poorly in dilution 1/80 and it was so reported by all but six laboratories. Specimen 2 was considered a weak negative, showing occasional clumping in dilution 1/40. Fifteen of the examiners reported this specimen as negative. Eighteen found agglutination in the first dilutions only, while four reported agglutination in all dilutions. It is possible that three of these (Nos. 4, 10 and 21) may have confused the reports of specimens 1 and 2. Only six failed to find powerful agglutination in specimen 3 which was chosen as the most strong positive, agglutinating in a dilution of 1 to 320. Specimen 4 was normal rabbit blood and was reported negatively by all but three. It should be said in explanation of these variations that in every instance those reports showing the greatest discrepancy were received from laboratories where the volume of work is very small.

In addition to a comparison of the results obtained, several other factors are worthy of note. First, the specimens used were of dried blood. Ruediger and Hulbert* have stated that in their experiments along similar lines they have found this method was feasible, but such an extensive test as we have made has not been previously reported. In our experiment the dilution was of the "hit or miss" type which, although not scientific, yet shows itself to be practical. Second, previous workers have reported no appreciable deterioration in the agglutinating titre in two weeks. In our work more than three months elapsed between the time of bleeding and the last examination of specimens. The results showed that in this time the strength of the agglutinating serum had not depreciated enough to make any change in the findings. Further, to confirm this observation the five state laboratory diagnosticians were each asked to test the original specimens. Their reports showed that if there was any deterioration it was barely perceptible.

Encouraged by the results of this experiment it was decided to extend the scope of the work. Unstained preparations to be

* American Journal Public Health, Vol. 4, No. 2, page 113.

examined for the presence of *B. diphtheria*, were distributed among the laboratories. In the preparation of these smears the following technique was observed:

Ten specimens were chosen from cultures sent to the State Laboratory at Albany. Three (A, B, E) were selected because of luxuriant growth of a typical organism from cultures sent in for the initial diagnosis of diphtheria, three others (C, D, F) were selected from release cultures and contained organisms with less typical morphology and four (G, H, I, J) were taken from cultures that contained no diphtheria bacilli. From each specimen one hundred films were spread on new glass slides within twenty-four hours of the time the culture was received at the laboratory. The specimens were designated by letter in the order chosen and the slides were numbered in succession as made. The films were allowed to dry in the air then fixed by passing through a flame. To prove the worth of the specimen the 20th, 50th, 70th, 90th and 100th films were stained with Loeffler's methylene blue and examined. If the examination of these five films showed them to conform with the first film prepared the remainder were set aside to await the results of cultural and virulence tests. No specimens were accepted unless the organisms gave the classical cultural reactions in the sugars and a positive virulence reaction when introduced into animals.

To every laboratory was sent a preparation from each of the ten specimens, information sheets containing all the facts submitted with the original specimen except the names of the physicians and patients and a request that the bacteriologist stain the specimen according to his own technique and report his findings promptly. A compilation of the reports received is shown in the accompanying chart. The laboratories are designated by the same numbers as in the preceding experiment.

A study of the reports received reveals the following:

Specimens	A, B, and E	—Typical cultures of <i>B. diphtheria</i> .				
"	A	positive by	28	bacteriologists,	negative by	2.
"	B	"	"	24	"	" 4.
"	E	"	"	29	"	" 1.

Specimens	C, D and F	—Not quite typical cultures of <i>B. diphtheria</i> .				
"	C	positive by	21	bacteriologists,	negative by	9.
"	D	"	"	21	"	" 9.
"	F	"	"	15	"	" 13.

Specimens G, H, I and J—Contained no *B. diphtheria*, but
B. hoffmani and *B. pseudo diphtheriae*.

"	G	positive by	5	bacteriologists,	negative by	24.
"	H	"	"	11	"	" 19.
"	I	"	"	10	"	" 18.
"	J	"	"	0	"	" 24.

It must be remembered that while special care was taken to give each bacteriologist all the information and advantages of study that we possessed, it was not possible for him to see the culture itself and occasionally an examination of the growth on serum is a material aid in diagnosis.

As a third step in the experiment a set of slides was prepared from ten sputum specimens and distributed among the laboratories with the request that they stain and examine for the tubercle bacillus. The same technique was employed in preparing the films and submitting the specimens as that reported in connection with the diphtheria work. Four specimens (A, B, C, D) were chosen because they showed more than one organism to the field, three others (E, F, G) showed one organism in from three to ten fields, and three (H, I, J) were definitely negative. In submitting the films information was given as to whether the original specimen was for an initial examination, or for a re-examination. If it was for re-examination the results of the previous examinations were given.

The results of this experiment are shown in Chart III. The laboratories are again designated by the same numbers as in Chart I.

CHART III
RESULTS FROM EXAMINATION OF SPUTUM SPECIMENS

Laboratories	1	2	3	4	5	6*	7	8	9	10	11	12	13*	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Specimen																														
A	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
B	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
C	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
D	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
E	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
F	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
G	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
H	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Specimens A, B, C, D showed more than one tubercle bacillus per field.
 " E, F, G " one tubercle bacillus in from three to ten fields.
 " H, I, J " had no tubercle bacilli

Positive
+
Negative
-

Laboratories represented by same numbers as in Chart II.

An examination of this chart will show that there was almost entire agreement in the reports received.

Specimen	A	was found positive by	30	examiners.					
"	B	"	"	"	29	"	negative by	1	
"	C	"	"	"	28	"	"	"	2
"	D	"	"	"	30	"	"	"	
"	E	"	"	"	29	"	"	"	1
"	F	"	"	"	26	"	"	"	4
"	G	"	"	"	27	"	"	"	3
"	H	"	"	"	2	"	"	"	28
"	I	"	"	"	2	"	"	"	28
"	J	"	"	"	0	"	"	"	30

CONCLUSIONS.

I. Standardization of laboratory methods of examination of specimens and systems of reporting results is desirable.

II. Blood from rabbits immunized against typhoid bacilli makes satisfactory specimens for agglutination test.

III. For submitting dried blood specimens the aluminum plate gives satisfactory results.

IV. Occasional interchange of specimens for examination and comparison of results promotes uniformity.

V. Employment of uniform methods in examination of specimens and the reporting of findings promotes standardization.

ANALYSIS OF A YEAR'S SURGICAL WORK, 1919, OF E. MACD. STANTON, M. D., F. A. C. S., AND C. W. WOODALL, M. D.

*Read before Staff Clinical Meeting, Ellis Hospital, Schenectady, N. Y.,
April, 1920.*

By C. W. WOODALL, M. D.

The following analysis of surgical work done by Dr. Stanton and myself during the year 1919 was made that we might obtain a clearer perspective of the work as a whole, and possibly a fuller appreciation of mistakes or errors in judgment and technique.

During the year we operated 466 cases. I have arranged these in groups, following anatomical and pathological classifications as far as possible.

Acute Appendicitis.

There were forty-two cases of acute appendicitis, twenty-five of whom were operated before abscess formation or the presence of granulation tissue necessitated drainage, while seventeen were definitely appendiceal abscesses or the presence of organizing exudates required their drainage. The large majority of these cases were drained by the use of a rubber tube and vioform gauze, the exception being in two or three cases where a simple cigarette drain was employed.

In addition to the above there was one case of an old abdominal fistula resulting from the drainage of a former appendiceal abscess, in which the fistula tract and appendix were removed. There were also two cases of acute appendicitis which were not operated, one of these entered the hospital with an advanced peritonitis, was deemed too sick to operate and died soon after, the other case recovered under the Oschner treatment. Five of the cases died and will be discussed at the latter end of this paper together with the other deaths occurring during the year.

In addition to the appendiceal abscesses there were two cases of abdominal abscess, of undetermined etiology. One was probably due to a diverticulitis. The other developed following an attack of epidemic flu and no local origin could be made out. This latter case, after lingering for weeks without sufficient resistance to even run a fever, finally died in spite of apparently adequate drainage.

Chronic Appendicitis.

During the year sixty-six appendices were removed in which there was no active inflammatory change in the appendix itself. Seventeen of these were removed under the clinical diagnosis of chronic appendicitis with a history of recurrent attacks suggesting mild attacks of acute appendicitis. One case operated under this diagnosis proved to have calcified tuberculous mesenteric lymph glands. The other forty-nine were removed simply incidentally during the course of other laparotomies.

It is worthy to note that when we study the pathological reports of these entirely different groups they show that there is no correspondence between the supposed microscopical patho-

logical findings and the clinical symptoms. In our opinion the diagnosis of chronic appendicitis must be based almost entirely upon the clinical history supported to some extent by the gross findings at operation. The microscopic findings are practically of no service, for repeatedly we have found that the microscope reveals histological evidence of chronic inflammation in appendices removed incidentally during the course of laparotomy for some other condition and in which neither the history, physical signs nor gross pathology suggested a chronic appendicitis. Conversely, many typical clinical cases of chronic appendicitis proved by permanent cure following the operation show little or no noteworthy microscopical changes in the appendices.

Gall Bladder.

Twenty-one cases were operated under the diagnosis of gall bladder disease, of these eleven had gall stones in the gall bladder or cystic duct and two in the common duct. Of these first eleven cases five had a simple drainage of the gall bladder after the removal of the stones. Two of these five were accompanied by a mild degree of cholecystitis. In the other six cases the gall bladder was removed. One of these was an acute perforation of the gall bladder, one an empyema, while the remaining four were so involved in peri-cystic adhesions that a cholecystectomy was indicated.

The two common duct cases had the common duct literally packed full of stones and putty-like, inspissated bile. In both of these cases the gall bladder was left in and the ducts and the gall bladder drained. Six months later, one of these common duct cases had to be reoperated for stricture of the lower end of the duct. The gall bladder and duodenum were so firmly united by a mass of adhesions that it was hopeless to attempt repair of the duct. The duodenum was opened and a curved clamp passed through the wall of the duodenum, the adhesions and into the gall bladder. Through this opening a rubber catheter was passed and left until the anastomosis was established. This cholecystenterostomy gave a perfect functional result. Several of the cases operated had no gall stones present but showed extensive cholecystitis or pericholecystitis, and in one case con-

genital lack of gall bladder with an inflammation of the ducts, and in another case a chronic pancreatitis and pericholecystitis so that operative interference was indicated. In four of these cases we removed the gall bladder, in two of them the gall bladder was drained, and in the case of congenital absence of the gall bladder the ducts were drained. In the case of chronic pancreatitis the gall bladder was drained.

The percentage of gall stones in this series of gall bladder cases is approximately the same as that reported by the Mayo Clinic.

In the cases of gall bladder drainage we used the Taite-Oschner technique, viz., the gall bladder is sewed to the peritoneum and packed with vioform gauze, care being taken that there is no inversion of the mucosa as is the case when a rubber tube is sewed in with a purse string suture. After four or five days this gauze is removed and a soft rubber tube inserted until the drainage tract is well established.

Gastric and Duodenal Ulcer.

There were seven cases of gastric and five of duodenal ulcer. Two of the gastric cases were perforated and in them the only operative procedure was to close the perforation. In the other five gastric cases the ulcer was in the region of the pylorus and we did a simple posterior-gastroenterostomy without excision of the ulcer.

Of the five duodenal ulcers two were treated by excising the ulcer longitudinally and then closing the incision transversely according to the method of Finney. In the other three we did posterior-gastroenterostomies. In one case the ulcer area was closed in by linen sutures in addition as there was a chronic perforation. The only complication of convalescence was in one case who had a slight pulmonary embolus which did not prove serious.

The chief danger following a gastroenterostomy is from hemorrhage of the gastric and intestinal vessels in the line of suture. Surgeons have for years used rubber tube covered clamps to hold the stomach and jejunum in approximation, to control hemorrhage during the operation and to prevent the escape of stomach

and intestinal contents. Believing that post-operative hemorrhage was largely due to the use of these clamps which obscured the bleeding points during the anastomosis we discarded them more than five years ago, and since then have held the ends of the anastomotic areas together by small mouse toothed stomach clamps, walling off adjacent tissues by gauze. We have found, first, that approximation is perfect and there is a more natural lay of both stomach and jejunum; second, that there is little or no escape of stomach and intestinal contents but rather a tendency for them to be sucked in; and third, that all bleeding points immediately show up and can be ligated or controlled by sutures. Since following this technique we have never had a post operative hemorrhage and have almost entirely eliminated post-operative vomiting which is largely due to blood in the stomach.

Intestinal Obstruction.

Not counting the cases of strangulated hernia there were four cases of intestinal obstruction. Three of these cases were acute, one being due to a Meckel's diverticulum the tip of which was adherent to a loop of small intestine, thus forming a ring by which several feet of small intestine had become strangulated. In the second acute case the obstruction was due to adhesions from a carcinoma of the rectum. The third case was a post-operative obstruction caused by a band of adhesions from the region of the pancreas to the spleen, shutting off the transverse colon. The case of partial obstruction was due to firmly organized adhesions from the omentum to the cecum.

Tubes and Ovaries.

Forty-two patients were operated for either an acute or chronic lesion of the tubes and ovaries. Twelve of these were for acute salpingitis of whom eight had already developed tubovarian abscesses. The other four were examples of simply acute inflammation of the tubes without abscess formation. In all but one of these cases the tubes were removed, the exception being in a massive pelvic abscess where drainage alone was performed.

Twenty-three cases showed some chronic lesion of the tubes or ovaries such as chronic salpingitis, hydrosalpinx or cyst of

the ovary. Many of these cases involved the appendix secondarily in a peri-appendicitis.

Our usual operative procedure in these tubal cases was to remove both tubes, one ovary, and the appendix if it were involved or could be removed without adding to the operative risk. The round ligaments were then shortened by pulling the uterus forward and stitching them to the posterior surface of the fundus. In some cases a temporary ventral suspension was done by passing a silkworm gut suture through the abdominal wall and fundus of the uterus. In only one case was one tube left in which seemed to be but little involved in the pelvic inflammation. This was in a young girl who did not wish to be sterilized. Later on she had the expected amount of post-operative trouble and I understand was operated in another city for removal of the other tube.

Seven of the pelvic cases were operated for ectopic pregnancy. Six of them tubal and one ovarian. Four of the tubal cases were ruptured and had sustained a severe loss of blood, the other three cases had not reached the stage of rupture.

There were no deaths in this series of forty-two cases and the only post-operative complication was a temporary fecal fistula developing in one of the pelvic abscess cases.

Uterus and Cervix.

Thirty-seven cases were operated for pathological conditions of the uterus or cervix, as follows:

Caesarian section	2
Supravaginal hysterectomy for fibroids	9
Vaginal hysterectomy, prolapsed uterus	1
Amputation of cervix for erosion and lacerations.....	2
Cautery of cervix for erosion.....	1
Cautery of cervix for inoperable cancer.....	1
Uterine suspension for retroversion	3
(Accompanied by some other operation such as perineorrhaphy)	
Curetage for uterine polyp	8
Curetage for retained secundines	6
Curetage for hydatidiform mole	1
Dilatation of cervix for sterility	1

There were no deaths or post-operative complications in any of these cases.

Hernia.

There were forty cases of hernia; twelve of these, double inguinal hernias; fifteen, left inguinal hernias; seven, right inguinal hernias; two, ventral hernias following old abdominal operations; and one each of left and right femoral hernias. Thirty-two of the operations were performed under ether and seven under local novocaine anaesthesia. Two of the cases were strangulated and two were for recurrences.

The inguinal hernias were repaired by the Ferguson-Andrews method, *i. e.*, the cords were not transplanted and the closures were made by sewing the internal oblique muscle to the shelving edge of Poupart's ligament with kangaroo tendon, and then imbricating the deep fascia. The ventral hernias were closed by imbricating the fascia using the Mayo technic.

Rectal.

Twenty-eight rectal cases represented the following conditions: hemorrhoids, 23; fistula-in-ano, 3; prolapsed rectum, 1; combined hemorrhoids and fistula-in-ano, 1. Of the hemorrhoid cases nineteen were operated by the use of the old-fashioned clamp and cautery method, the other five were ligated and excised, three of these cases being done under local novocaine anaesthesia. The four cases of fistula-in-ano were treated by opening up the fistulous tract through the sphincter and dissecting out the lining membrane and packing the incision wide open. The prolapse case was not operated but was treated by strapping the buttocks together and suspending the legs from the overhead beam of a fracture bed. This case was in an infant of a few weeks old and there was a complete recovery in about two weeks. All of these patients were discharged from the hospital without complication.

Just a word in regard to the clamp and cautery method of dealing with hemorrhoids. I am fully aware that many of the modern proctologists lay much stress upon and prefer an excision of the hemorrhoids under local anaesthesia, condemning the

burning operation because of possible contracture of scar tissue. I believe this fear is more theoretical than real, for in the years we have been doing this operation I have not seen even one case where a post-operative scar has caused trouble. A temporary paralysis of the sphincter can best be accomplished by having the patient under a general anaesthesia, and is a most important prerequisite in any hemorrhoid operation. We have found that cases in which a thorough stretching has been done and hemorrhoids burned off that there is very little post-operative discomfort and a satisfactory and permanent cure is the result.

Kidneys and Ureters.

Four kidney cases were operated, two for stones complicated by hydronephrosis, in which cases the kidneys were removed. In the other two cases there was a hydronephrosis, due to super-numerary vessels. In these cases the offending vessel was ligated and a drainage of the pelvis was done. One case of ureteral calculus was operated, the stone removed and the ureter region drained. There were no post-operative complications in these cases.

Cord and Testicles.

Five cases were operated for pathological conditions of the cord and testicles.

Tuberculosis of epididymis, resection	2
Excision of painful atrophied testicle.....	1
Hydrocele of cord	1
Bevin's operation for double undescended testicle.....	1

Prostate.

Two cases were operated for enlarged prostate. These were both done by the suprapubic route, first performing a cystotomy and seven to ten days later removing the prostate. These, as well as the cases of cord and testicle operations, recovered without complications.

Goiter.

There were ten goiter cases during the year, seven of whom had thyroidectomies at the primary operation, one who had the

superior thyroid vessels ligated at the first operation followed by a thyroidectomy one week later and two cases where a simple ligation of the vessels was performed. The three ligations and one of the thyroidectomies were done under local novocaine anaesthesia, the others under ether. Six of the cases were exophthalmic goiters, two cystic goiters, one an encapsulated adenoma and one a colloid goiter. All of these cases were discharged without having had any hospital complications.

Perhaps no other class of cases required a more careful planning and carrying out of preoperative and operative technic than do the exophthalmic group. We have found that by operating these cases early in the morning, not later than 8:30 A. M., we avoid the apprehension and consequent augmented heart action and nervousness which these cases are so prone to develop. The patients are placed in a head elevated position, a strap passed under the feet to keep them from sliding off, the arms pulled down and tied, thus lowering the shoulders and giving a clearer field for operation, and a small sand bag placed under the lower part of the neck to elevate the thyroid. Upon returning to their beds they are given a back rest. It is noteworthy that the cases which do well and make uninterrupted hospital recoveries usually have a steady reduction in pulse rate from the start of the anaesthetic. We have often started an anaesthetic for a patient whose pulse ranged from 110 to 120 and when the thyroidectomy was completed the pulse had dropped to 80 or 90. If the patient is going to be a dangerous operative risk it is easy to note that instead of this reduction in pulse rate beginning when the anaesthetic is started that the pulse continues to mount so that at the time the patient is asleep it can be decided whether or not the operation should be undertaken.

Tonsils.

Fifty-nine tonsil cases were operated, practically all of these being accompanied by adenectomy, the exceptions being a few cases of adults where there was no overdevelopment of adenomatous tissue. All but one of the fifty-nine cases were operated under ether, the patients in the prone position and the snare used for their removal. The other one was operated in a sitting

posture under local novocaine anaesthesia. The removal of the adenoids was accomplished without exception by scraping out with a gauze covered finger. Of the fifty-nine cases there were only two who had any post-operative complication, these two being due to hemorrhage after waking up from the anaesthetic. One case was controlled by digital pressure and the bleeding stopped before the loss of blood became serious. The other case, who proved to be a typical hemophiliac, bled so freely that a transfusion of blood was done following which the patient made an uncomplicated recovery.

Carcinoma and Sarcoma.

Ten cases of carcinoma were operated as follows:

Epithelioma of face.....	4
Epithelioma of foot	1
Cancer of breast, radical operation.....	1
Cancer of breast, excision of recurrent nodule.....	1
Cancer of rectum with intestinal obstruction.....	1
Cancer of cervix, cauterized	1
General carcinomatosis, exploratory lap	1

There were five cases of sarcoma, as follows:

Bone aneurism of hip	1
Sarcoma of caecum, exploratory incision and closure.....	1
Sarcoma of media stinum, exploratory incision and closure..	1
Giant cell sarcoma of ulna, excision of growth.....	1
Sarcoma of forehead, excision	1

With the exception of the bone aneurism, these patients left the hospital without complication. The sarcoma of the media stinum died ten months after the operation from suffocation due to pressure of the growth on the trachea.

Benign Tumors.

There were five cases of benign tumor, as follows:

Adeno-papilloma of labia majora, excised	1
Papilloma of great toe, excised.....	1
Osteoma of ulna, excised	1
Coccygeal cyst, excised	1
Angioma of cheek, cauterized	1

Vaginal Operations.

Fourteen cases were operated for vulvo-vaginal conditions, as follows:

Perineorrhaphy for lacerated perineum	4
Anterior colporrhaphy for vesicocele and perineorrhaphy...	3
Repair of vesico-vaginal fistula	1
Repair of rectocele and perineorrhaphy.....	1
Cautery of urethral caruncle	1
Ligation of varicose veins of vulva.....	1
Vaginal cystotomy	1
Incision of imperforate hymen	1
Excision of papilloma from labia (reported above under tumors)	1

Breast Amputations.

There were four breast amputations for conditions other than cancer, viz.:

Chronic mastitis	2
Pagets Disease	1
Double amputation for overdevelopment of male breast.....	1

Osteomyelitis.

Three cases were operated for acute osteomyelitis, two of these having the infection in the femur and one in the tarsal bones. One of the femur cases had four subsequent drainage incisions during the year and at one of these operations the head of the femur which had been thrown off as a sequestrum was removed. The upper two-thirds of the femur of the patient was removed at the primary operation with the exception of the head, but an x-ray taken about ten months later showed a complete regeneration of the femur. The patient obtained a very satisfactory functional result.

Empyema.

Two cases were operated for thoracic empyema, one an acute case, with resection of rib. The other was a chronic recurrent case upon whom a Schede operation had been performed about a year previously.

Abscesses.

Thirteen abscesses of superficial parts were opened and drained, as follows:

Neck	1
Inguinal	4
Axillary	1
Mammary	1
Perinephritic	1
Jaw	2
Wrist, gonorrheal arthritis	1
Knee, infected bursa	1
Right thigh	1

Tubercular Cervical Adenitis.

Eleven cases were operated for tubercular lymph glands, a complete dissection with the gland bearing fascia being performed where the involvement was extensive. A few of the cases where there was discrete involvement simply had the involved gland excised and the area drained.

Circumcision.

Ten circumcisions were performed, two under local novocaine anaesthesia and eight under ether.

Casts.

Exclusive of fracture cases there were seventeen casts applied during the year, as follows:

Body and leg casts for tuberculosis of the hip.....	8
Body casts for tuberculosis of the spine.....	4
Body cast for nontuberculous spondylitis.....	1
Casts on both ankles for tuberculous arthritis.....	1

Fractures.

Twenty-one fracture cases were treated, the lesions being distributed as follows:

Base of skull	1
Lower jaw	1
Clavicle	2

Humerus	1
Forearm	6
Vertebra	1
Femur	4
Lower leg	4
Bones of foot	1

Orthopedic and Plastic Surgery.

Reamputation of stump of tibia for projecting bone.....	1
Bone grafting for ununited fracture of radius.....	1
Resection of knee joint	1
Resection of tuberculous elbow	1
Mayo operation for bunion	1
Amputation of finger for frost bite gangrene.....	1
Lengthening of wrist tendons	1
Separation of web fingers	1
Painful callous of foot removed.....	1
Sesamoid bone of foot removed.....	1
Toenail excised	1
Skin grafting for burns.....	7

Accident Surgery.

Seven cases were operated for accidents, as follows:

Lacerated face	1
Crushed or lacerated hands	4
Lacerated knee and hand	1
Stab wound of chest	1
Foreign body in oesophagus	1
Crushed legs	1

Miscellaneous.

Exploratory laparotomy with negative findings.....	2
--	---

One of these, a child, I operated under the diagnosis of an acute appendix. The other was for a possible small ventral hernia where a separation of the recti muscles could be felt and the patient was positive that his symptoms came from this source. Upon incision, however, no hernia could be found.

Exploratory laparotomy, passive congestion of the liver 1

This patient gave a history of a severe blow in the epigastrium and at the time of examination a mass could be felt in this region. As an abscess or haematoma could not be ruled out on the physical examination an exploratory incision was made and the mass found to be due to a very large passively congested liver.

Congenital Lane's Kink 1

Intraspinal salvarsanized serum 4

These four treatments were given to one patient at intervals of about four weeks. It was an early case of spinal syphilis with marked ataxia, lightning pains, bladder symptoms, etc. The Fordyce modification of the Swift-Ellis technic was used and the improvement shown in the patient's walking, bladder function, and general health has been most marked.

Exploratory laparotomy, Hodgkin's disease 1

Mastoid, radical 1

Dissection of varicose veins of leg 2

Extraction of teeth 4

Stretching of sciatic nerve under anaesthesia 1

Examination of neck muscles under anaesthesia 1

Frenum of tongue incised 1

In addition there were thirty cases treated by us in the hospital without operation, including such conditions as contusions, lacerations, inoperable carcinoma, tetanus, incarcerated uterus, retention of urine, burns, anaemia, sprains, concussion, cholecystitis, nephritis, cystitis, Vincent's angina and tuberculosis of the bladder.

Several blood transfusions were done during the year by the Lewisohn citrate method. The ease and simplicity with which this can be done has made it a routine procedure in any case where there has been severe hemorrhage such as bleeding ulcers, ruptured ectopic pregnancy, hemophiliacs, accident cases and pernicious anaemia.

DEATHS.

Among the cases treated by us in the hospital in the year 1919 there were twenty-four deaths. Eight of these deaths were in

patients not operated and classed as hopeless from the time they were admitted to the hospital. The hopeless condition of two of these eight must, however, be charged to errors on the part of the physicians who first saw the cases. One young man received a deep perforating wound of the foot from a piece of metal lying in a cow yard. He did not receive an immunizing dose of antitoxin and he died of tetanus. One woman was admitted with a hopeless general peritonitis due to an unrecognized appendicitis of four days' standing. The remaining six cases were primarily hopeless and comprise one burned child, three old chronic nephritises and two obviously inoperable abdominal cancers.

One man with a railroad crush of the upper thigh and various internal injuries was admitted in great shock and died a few hours after admission. I believe that this man's condition was hopeless from the first.

A man aged seventy-seven, operated for an acute intestinal obstruction due to an adhesion to an inoperable cancer of the rectum, died with symptoms of anuria a week following his palliative operation.

One young woman died a month after a splenectomy. The probable hopelessness of the operation was fully recognized in this case, but the patient and family elected to take a chance. The enormously enlarged spleen was due to Hodgkin's disease of the abdominal type. The operation neither shortened nor prolonged her life.

One woman with an inoperable sarcoma of the thigh died three months after an exploratory operation to determine the histology of the growth.

J. D., an old chronic empyema case known to most of the surgeons of this vicinity, had been apparently cured following an extensive Schede operation. Some months after returning to work he had a sudden tearing pain in his chest followed by a recurrence of dullness and bulging of the area of the rib resection. On reopening the old sinus, we found a bloody, purulent exudate. In spite of all sorts of local attempts to control the hemorrhage, blood transfusions and the use of various serums, this patient continued to bleed almost daily for forty-one days.

He had marked symptoms of amyloid disease and his acquired tendency to hemorrhage was probably associated with this condition.

One man, aged fifty, died of sepsis four months after operation for an abdominal abscess of undetermined origin. The insidiously developing abdominal abscess was probably simply an incidence in the course of his pyemic infection.

One man, aged fifty-five, died of pyemia and septicaemia of about six weeks' duration. We drained a few large superficial abscesses in this case, but its hopelessness was obvious from the first as his blood stream was full of streptococci and multiple abscesses could be demonstrated wherever sought.

One man, aged sixty-seven years, died suddenly sixteen days after drainage of the common duct. The chief symptoms in this case was intense jaundice and intolerable itching with occasional attacks of severe pain. At operation absolutely no evidence of a gall bladder could be made out, although there were no adhesions and nothing to obscure the observation of the normal site of the gall bladder. The jaundice was due to cholangitis. This is the second case that we have seen of congenital absence of the gall bladder and both patients have died of cholangitis. It seems to us that these observations at least indicate that the gall bladder may play some function in protecting the hepatic bile duct system.

Among the operative cases of the year 1919 there were only two deaths that may be classified as operative deaths. The first was that of a male, aged twenty-eight, operated for left inguinal hernia with an appendectomy through a right rectus incision. While ligating the mesentery of the appendix some vessel was either torn or it retracted beneath the ligature. At any rate a rapidly forming haematoma developed in the mesentery in the region of the ilio-caecal junction. At first an attempt was made to control this hemorrhage by manual pressure, but as the haematoma continued to increase in size the mesentery was opened and the bleeding point controlled by ligation. This patient was apparently all right the day following the operation, but the second day he developed pain, distension and an extremely weak pulse. I believe that the death in this case was due to interference with the mesenteric circulation.

The second operative death was in a woman, aged fifty-six, who was extremely obese and who was much troubled by two fatty masses situated one in each groin. We excised both of these masses and at the same time did a perineorrhaphy for an old laceration with poor bowel control. Death in this case occurred twelve days after the operation and was preceded by air hunger and a low delirium deepening into coma. The first unlooked-for symptoms in this case were ascribed to multiple fat emboli and I believe that the death was due either to the emboli or to an acidosis or both.

A male, aged thirty-seven, died two days following an operation for an old incompletely strangulated ventral hernia and an incarcerated left inguinal hernia. Although a considerable amount of very fat inflamed omentum was excised in this case we did not look upon the operation as a particularly dangerous one at the time. About forty-eight hours after operation he began to develop a hyperpyrexia and he died in about twelve hours. We have never been able to satisfactorily account for this death. It occurred on the hottest day of the year. I doubt if he would have died if the excessive heat had not occurred in phase with whatever was the primary cause of his fever. There were no noteworthy abdominal symptoms and I have always suspected that fat emboli, the result of crushing the omentum, may have played a part in causing his death.

There were five deaths among patients operated for acute appendicitis. During or following previous epidemics of influenza the literature has contained a few references to an apparent relationship between the occurrence of an especially virulent type of appendicitis and the influenza. During the course of a light but definite epidemic of the grippe occurring in the spring of 1910, we had a very high mortality rate from appendicitis. Coincident with the outbreak of influenza in 1918 we began to encounter infections of a peculiarly virulent and fatal type beginning as ischioirectal abscesses, perineal abscesses, tooth abscesses and I believe also as appendicitis. Two of our fatal cases of appendicitis were operated within thirty hours of the first onset of the attack and yet they revealed perforated appendices with peculiarly little inflammatory reaction and a diffuse peritonitis which progressed steadily and with little subjective

reaction to a fatal termination. These two cases were in men, aged thirty and thirty-five, and yet they reacted to their infection much as one would expect old men of eighty. Three of the fatal cases were operated on the third and fourth days. These patients were not operated earlier because the absence of a temperature had misled their family physicians, and yet at operation an extensive peritonitis was found. Two of these patients died without putting up any noteworthy fight. One patient acted much as the others at first, but after a few days developed a temperature commensurate with his infection and had apparently weathered the storm when he had an accident in his rectum and developed an acute gangrenous inflammation which rapidly extended over the perineum and scrotum and up to the lower abdomen before death. This is exactly the same type of inflammation which was present in the fatal non-appendicular inflammations which we observed during and following the influenza epidemic. It is not my intention to promulgate any theories concerning these infections, but I feel that a careful statistical study of these surgical infections might throw an interesting side light on the peculiarly virulent infections exhibiting themselves as pneumonia and sometimes as peritonitis of unknown origin during the flu epidemic.

In looking back over these twenty-four deaths we find that the mortality was slightly higher than most years, and yet our conscience is fairly clear for in only three of the fatal cases is hindsight apparently better than foresight. The mesenteric hemorrhage was an accident difficult to foresee. I believe it was due to a little too conscientious an attempt on my part to hold the clamped mesentery of the appendix in a position easy to ligate. The tension either ruptured the vessel below the clamp or pulled it off from the clamp. It was possibly bad judgment to try to remove the mechanically troublesome fat masses in the case of the obese lady. She looked like a bad risk and she proved to be one. In the remaining twenty-two cases I can at present think of no changes either in judgment or technic which would give any assurance of a better prognosis. One of the twenty-two deaths was, however, I believe due to the easily avoidable accident which occurred in his rectum.

Public HealthEdited by **Arthur Sautter, M. D.**

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

BUREAU OF VITAL STATISTICS.

DEATHS FOR THE MONTH OF MAY, 1920.

Consumption	17	Broncho Pneumonia	11
Typhoid Fever	0	Bright's Disease	13
Scarlet Fever	0	Apoplexy	11
Whooping Cough	1	Cancer	18
Diphtheria	1	Accidents and Violence.....	9
Influenza	1	Deaths under 1 year.....	12
Measles	0	Deaths over 70 years.....	37
Diarrheal Diseases	2	Death rate	16.78
Pneumonia	6	Death rate less non-residents	13.50

Deaths in Institutions.

	Non- Res.	Res.		Non- Res.	Res.
Albany Hospital	8	10	St. Peter's Hospital.....	5	8
Albany Hospital T. S... ..	1	1	Public Places	0	1
Albany County Hospital	4	2	Pine Hills Sanitarium..	0	1
Child's Hospital	1	2	National Training School		
Homeopathic Hospital .	4	7	for Nurses	0	1
Little Sisters of the Poor	1	1			
Hospital for Incurables.	1	2		29	40
Maternity Hospital	2	4	Births		191
St. Margaret's House...	2	0	Still Births		4

DIVISION OF COMMUNICABLE DISEASES.

Typhoid Fever	0	Whooping-cough	22
Scarlet Fever	17	Tuberculosis	28
Diphtheria and Croup.....	5	Mumps	19
Chickenpox	13	Pneumonia	46
Smallpox	1	Influenza	10
Measles	79		
German Measles	0	Total	240

Number of days quarantine for scarlet fever:

Longest..... 33 Shortest..... 30 Average..... 30 7/19

Number of days quarantine for diphtheria:

Longest..... 20 Shortest..... 11 Average..... 14 2/3

Fumigations: Rooms..... 290 Buildings..... 61

Milk bottles disinfected..... 434

Communicable Diseases in Relation to Schools.

	Reported		
	D.	S.F.	M.
Public School No. 4.....	..	2	2
Public School No. 5.....	2
Public School No. 6.....	1
Public School No. 7.....	1	..	..
Public School No. 16.....	..	1	..
Public School No. 17.....	..	1	..
Public School No. 18.....	..	1	1
Public School No. 20.....	1
Public School No. 21.....	39
Public School No. 22.....	9
St. Joseph's Academy.....	4
St. Vincent de Paul's.....	..	2	1

MISCELLANEOUS.

Cards posted for communi- cable disease	86	Children examined for em- ployment certificates	10
Cards removed	45	Number of employment cer- tificates issued	10
Notices served on schools...	202	Taking specimens of blood for Wassermanns	3
Notices served on stores and factories	18	Taking smears for Gonococci	0
Postal card returns sent to doctors	86	Notices served on milk deal- ers	61
Postal card returns received from doctors	45	Miscellaneous investigations by 7th District Physician..	10
Inspections and reinspections	98	Dogs examined for rabies..	2
Vaccinations	73	Dogs re-examined	2
Vaccination dressings	102		

NURSE'S REPORT.

Tuberculosis.

Living cases on record May 1, 1920.....	804
Cases reported:	
By card	28
Dead cases by certificate.....	8 36
	<hr/>
	840
Dead cases previously reported.....	9
Dead cases not previously reported.....	8
Removed	17
Died out of town.....	0
Recovered	0
Unaccounted for	0 34
	<hr/>
Living cases on record June 1, 1920.....	806
Total tuberculosis death certificates.....	17

Non-resident deaths:

Albany Hospital Camp.....	2	
C. F. L. Pavilion.....	0	
County Hospital	0	
St. Margaret's House.....	0	
City at large.....	0	
St. Peter's Hospital.....	1	3

Resident deaths	14
Visits to cases of tuberculosis.....	145
Miscellaneous visits	21
Visits to physicians.....	20

LABORATORY REPORT.

Diphtheria.

Initial Positive	10	Unsatisfactory	5
Initial Negative	171		
Release Positive	9	Total	248
Release Negative	53		

Sputum for Tuberculosis.

Positive	44		
Negative	149	Total	193

Widals.

Positive	0	Unsatisfactory	1
Negative	31		
		Total	32

Meningococcus.

Positive	0		
Negative	0	Total	0

Wassermann tests (positive 38)	324	Gonorrhoea Examinations (positive 14)	46
Milk Analyses	108	Miscellaneous examinations..	19
Water Analyses	0		
Pathological Examinations ..	0	Total examinations	970

HEALTH PHYSICIANS' REPORT.

Cases assigned	58	Calls made	163
----------------------	----	------------------	-----

DIVISION OF SANITATION.

Complaints	94	Reinspections	140
Inspections	84	Plumbing	17
Plumbing	25	Sanitary	123
Sanitary	59		

HEARINGS.

Hearings	2	Cases heard	2
----------------	---	-------------------	---

Class of Cases.

Filthy premises	1	Privy Vault	1
-----------------------	---	-------------------	---

Disposition of Cases.

Reinspection	2	Abated	0
--------------------	---	--------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	132	Smoke	0
Old Houses	63	Blue or red.....	2
New Houses	69	Peppermint	2
Permits issued	68	Water test	13
Plumbing	60	Houses examined	29
Building	8	Re-examined	55
Plans submitted	14	Valid	11
Old buildings	8	Without cause	18
New buildings	6	Violations	0
Houses tested	17		

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	15		
Dogs removed	71	Total	298
Cats removed	209	Eggs removed .....(cases)	12
Pigs removed	2	Fish removed .....(bbls.)	2
Chickens removed	1		

DIVISION OF MARKETS AND MILK.

Public market inspections...	24	Milk cans condemned.....	0
Market inspections	112	Lactometer readings	124
Fish market inspections....	21	Temperature readings	124
Fish peddler inspections....	0	Fat tests	0
Slaughter house inspections.	4	Sediment tests	90
Rendering establishment in-		Chemical tests	0
spections	0	Cows examined	134
Pork packing house inspec-		Cows quarantined	0
tions	3	Cows removed	0
Hide house inspections....	0	Complaints investigated	4
Milk depots inspected.....	14	Dealers' permits issued....	5
Stores inspected	30	Storekeepers' permits issued	74
Dairies inspected	15	Bob veal condemned...(lbs.)	120
Milk cans inspected.....	194		

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—REPORT FOR JUNE, 1920.—Number of new cases this month, 268; classified economically: Free, 110; bed cases, 42; prenatal, 10; dispensary soc. service, 28; tuberculosis (pos.), 5; tuberculosis super., 4; hospital social serv., 14; venereal social, 7. Paid, 158; limited means, bed cases, 55; Metropolitan, bed cases, 55; Metropolitan prenatal, 15; industrial bed cases, 33; industrial social cases, 0; Western Union, 0. Cases carried over from last month, 545; bed cases, 53; prenatal cases, 39; dispensary social serv., 5; tuberculosis (total), 303; hospital soc. service, 51; venereal, 94; industrial, 342; Western Union, 0. Classification of bed cases: Medical, 109; surgical, 6; obstetrical, 30; prenatal, 25; confinements, 28; maternity, 5; miscarriages, 5; number of babies born, 27.

Visits of Nurses (all departments), 2,098; for bed care, 1,248; prenatal instruction, 79; tuberculosis (sup. and inst.), 63; venereal dis. inst., 101; Hospital social serv., 133; general soc. service, 273; for other purposes, 77; dispensary social, 40; supervision, 84.

Source of Nursing Cases.—Metro. agts., 30; doctors, 81; nurses, 2; dispensary, 3; family or friends, 32; other sources, 25.

Disposition of bed cases: Discharged recovered, 67; improved, 65; unimproved, 20; dead, 8; to other care, 23; carried, 118. Disposition of other cases: Prenatal, discharged to maternity care, 17; discharged to hospital, 1; discharged to other care, 3; carried, 43; dispensary social service, discharged to disp. care, 28; carried, 5; hospital social service, discharged home, 12; dead, 0; to dispensary, 4; to Pavilion "F," 0; lost, 0; carried, 49; venereal: Discharged cured, 0; temporarily, 0; to other care, 6; carried by dispensary, 33; under supervision, 46; under care at the House of Good Shepherd, 16. Tuberculosis: Discharged dead, 9; left town, 0; not T. B., 0; carried (positive), 303; carried (supervision), 149. Industrial: Discharged (soc. or bed cases), 0; carried, 0. Total number of cases carried over into July, 762.

South End Dispensary Report.—Number of clinics, 80; surgical, 9; medical, 8; gynecological, 6; prenatal, 3; eye and ear, 16; venereal, 11; nerve, 4; nose and throat, 8; skin, 0; children, 8; lung, 0; children's lungs (Observ. Clinic), 5; clinics with doctor attending, 79; clinics without doctor attending, 10; number of new patients treated, 131; number of old patients treated, 632; total number of patients, 763.

Industrial Dispensary (at Huyck's Mills).—Number of clinics held, 21; number of new cases treated, 33; number of old cases treated, 148; total number treated, 181; number of physical examinations, 9. No industrial cases are really discharged, but we do not add them on to our cases carried nor do we add on the South End Dispensary cases as carried on our general report. They are kept separate.

Signed. FLORENCE R. NOLL, R. N., Asst. Superintendent.

CERTIFICATE AWARDS FOR GRADUATES IN HEALTH COURSE.—Certificates of graduation were presented on June 24, 1920, to the fifty-seven graduates of the special courses given during the last two years at the Albany Medical College, at a luncheon at the Hampton hotel. The classes were held at the college under the direction of the State Department of Health and were on infectious diseases and public health. Physicians and health officers from all parts of the State attended.

The graduates met at the college and formed the Eastern New York Post Graduate and Public Health Association. Dr. C. E. Duryee was elected honorary president and Dr. M. D. Dickinson of Troy president. Other officers elected were: Vice-president, Dr. W. E. Tredor, Scotia; secretary and treasurer, Dr. W. G. Keens, Albany. The executive committee includes Drs. J. H. Collins, Schenectady; G. E. Eveleth, Little Falls, and W. Van Dorn, Mechanicville.

Dr. Hermann M. Biggs, State Commissioner of Health, and Dr. Thomas Ordway, dean of the Albany Medical College, were chosen honorary members of the association.

Dr. Matthias Nicoll, Jr., Deputy Commissioner of Health, presided at the luncheon and Dr. Charles C. Duryee made the opening address. The certificates were presented by Dr. A. W. Elting of the Albany Medical College. Dr. M. D. Dickinson, health officer of Troy, gave his views on what he thought about the benefits that will accrue from the courses. "The New Aspects of Public Health" was the topic of Dr. E. C. Godfrey, director of the division of communicable diseases of the State Health Department.

Those receiving certificates were: John Archibold, Cohoes; Floyd J. Atwell, Cooperstown; P. E. Banke, Newburg; H. G. Blackfan, Cambridge; William W. Burgett, Fultonville; John E. Burke, Schenectady; William L. Clark, Hoosick; J. H. Collins, Schenectady; Eli Denney, Nassau; W. S. Donnelly, Wayville; M. K. Engell, Hyndsville; C. S. Eveleth, Little Falls; William J. Fleming, Troy; William E. Garlick, Wappingers Falls; J. E. Goodman, Warrensburg; C. W. E. Goodell, New Lebanon; L. W. Green, Milford; W. R. Grunswald, Crescent; R. A. Herbert, Cohoes; W. E. Hunt, Little Falls; William G. Koons, Albany; Winfield S. Kilts, Canajoharie; C. A. Krause, Watervliet; R. E. La Grange, Fort Ann; H. A. Losee, Livingstonville; Marcus M. Lown, Rhinebeck; J. C. Merchant, Pine Plains; Ralph A. McDougall, Duanesburg; H. J. Noerling, Valatie; R. M. Palmer, Gloversville; Eli S. Parsons, Slingerlands; William H. Rapp, Catskill; H. E. Sargeant, Ticonderoga; A. P. Squize, Rotterdam Junction; George N. Stillman, Argyle; James R. Strang, Schenectady; R. J. Taylor, East Nassau; C. A. Thompson, Luzerne; William C. Tredor, Scotia; William D. D. Van Auken, Watervliet; E. P. Van Denbergh, Round Lake; I. Ernest Van Hoesen, Coxsackie; J. E. Vigeant, Red Hook; J. D. Washburn, Delmar; William L. Wilson, Scotia; H. J. Wright, Schoharie; H. F. Yates, Cherry Valley; H. J. Frothingham, Cannonsville; Irving Van Woert, Demar.

THE GRADUATION EXERCISES OF THE ALBANY HOSPITAL TRAINING SCHOOL FOR NURSES were held on Wednesday afternoon, June 16th, 1920.

The commencement program opened with Florence Nightingale's favorite hymn, "The Son of Man Goes Forth to War." The Rev. Charles S. Hager, pastor of the First Congregational church, gave the invocation. The annual report of the school was given by Miss Sally Johnson, superintendent of nurses and principal of the school. Herbert E. Mills, dean of the Vassar Training Camp for Nurses, was the speaker, and after his brief talk Mr. Charles Gibson, President of the Board of Governors of the Hospital, made the presentation of the diplomas. The benediction was given by the Rev. Charles S. Hager and the program closed with a march by O'Neil's orchestra.

The planting of the class tree on the grounds of the hospital was the next ritual and an informal reception took place at the Nurse's Home. Miss Sally Johnson was assisted in receiving by Miss Ruth Holder of Menands, president of the graduating class, and Miss Elizabeth French of Albany, president of the Alumnae association. The alumnae dance in honor of the graduates took place at 8.30 in the recreation hall of the Nurses' Home. The class supper was given in the Hampton Hotel.

OCCULT TUBERCULOSIS.—A large group of patients suffer symptoms from a tuberculous infection which is non-progressive. The symptoms are due to a subtle intoxication which undermines the functional powers and co-ordination of all vital tissues. This condition Sewell of Denver terms "occult tuberculosis." The patients as a rule are not definitely sick. There is a general functional insufficiency with lack of staying power that is brought out by slight physical strain. Neuralgic pains, headache, dizziness, undue fatigue and nervousness are common symptoms. In women menstruation is apt to be scanty or is frequently missed. The temperature is usually not elevated but may rise slightly after exercise. The lungs are rarely suspected, but they give auscultatory and X-ray evidences of slight sclerosis involving especially the hilum lymph nodes and the upper bronchial radiations. The symptoms may often be traced to circulatory or harmonic insufficiency. Many of these patients have probably been classified under the title "effort syndrome" or "neurocirculatory asthenia." The most valuable objective sign of occult tuberculosis is the reaction of the blood pressure to slight strain such as changing from the supine to the erect position. Most of these cases have vascular hypotension, but the most significant feature is an abnormal lowering of pulse pressure and its tendency to progressive subsidence when the erect posture is assumed. This may be due to inordinate fall of systolic or to rise of diastolic pressure in the upright as compared with the recumbent position. This pressure change is not specific of occult tuberculosis but after exclusion of "focal infection," it should

suggest this condition and lead to the application of diagnostic methods, especially X-ray photography.

(SEWALL, HENRY. On Occult Tuberculosis, *American Review of Tuberculosis*, 1920, Vol. III, No. 11.)

COMPLEMENT FIXATION IN TUBERCULOSIS.—Petroff, of the Trudeau Sanatorium, contributes another of his several studies of the complement fixation test. He reviews a number of antigens that have been employed and discusses their nature and chemical composition. He has isolated substances corresponding to lecithin, kephalin, sphingomyelin, carnithin and cuorin from tubercle bacilli and compared their antigenic properties with those of various tuberculo-proteins. Lipins are anti-complementary in large doses and have no antigenic properties in small doses. Proteins do not give as strong reactions as proteins combined with lipins. The primary incubation time is very important and from one and a half to two hours is best. Complement fixing antibodies are probably globulins or substances absorbed with the globulins. To get satisfactory results it is important to have a proper hydrogenion concentration of the salt solution, to have the glassware thoroughly cleaned and to incubate at a temperature of between 35 degrees and 40 degrees C. The test in tuberculosis is more specific than the Wassermann test in syphilis. It should be standardized and performed only by well trained workers.

(PETROFF, S. A. Seroiological Studies on Tuberculosis. Second Contribution. Further Observations on Complement Fixation. *American Review of Tuberculosis*, 1920, Vol. III, No. 11.)

X-RAY DIAGNOSIS OF EARLY TUBERCULOUS COLITIS.—According to Brown and Sampson, of the Trudeau Sanatorium, in the early or latent stages of tuberculous colitis the clinical picture contributes little to diagnosis. However, certain X-ray shadows taken 6, 18, and 24 hours after a barium meal show definitely the presence of colonic ulceration, though their absence does not exclude it. The X-ray picture also shows hypermotility and spasm, or filling defects, and such a picture in a patient with pulmonary tuberculosis should lead to a definite diagnosis of colonic tuberculosis. The condition is far more frequent than has been hitherto taught, and must be excluded in all advanced cases as well as all early cases with abdominal symptoms, before submitting them to radical treatment. No examination of a patient with pulmonary tuberculosis can be considered complete without an X-ray study of the intestines.

(BROWN, LAWRASON, and SAMPSON, H. L. The Early Roentgen Diagnosis of Ulcerative Tuberculous Colitis. *American Review of Tuberculosis*, 1920, Vol. III, No. 11.)

BOTULISM.—During the latter part of 1919 numerous cases of poisoning, and a number of deaths, were reported in different parts of the country,

as a result of eating olives, or certain canned vegetables. These deaths were caused by botulism—literally “sausage poisoning.”

Botulism, according to a bulletin prepared by the Department of Medical Information of the League of Red Cross Societies, and made public by the American Red Cross, has in the past usually arisen from consumption of home-preserved food which was not correctly packed, but events such as those noted above had led recent investigators to conclude that infection with botulism through commercially-packed foodstuffs, while rare, is by no means impossible.

The obvious method of protection against botulism, which has a high mortality, is to refrain from eating preserved foods which are noticeably spoiled. The presence of the *Bacillus Botulinus* is usually indicated by a sour odor, or by some other plain evidence that food containing it is unfit to be consumed. While the presence of the bacillus has been noted only in foods which have been prepared for preservation in cans, jars or other containers, ordinary prudence demands the rejection of any comestible which, by smell, taste or appearance, shows signs of being spoiled.

Bacillus botulinus was first isolated by van Ermengem in 1896. It is of the anaerobic type; that is, it cannot exist where oxygen is present. When taken into the human system, it lodges in the digestive tract, and the toxins produced there spread over the body. Inasmuch as the first symptoms of botulinus do not appear until it is too late to employ the stomach pump or emetics, and since the only treatment is a serum of doubtful value, the fight must be devoted mainly to keeping up the sufferer's strength and combating the various symptoms as they occur.

Botulism is somewhat similar, in its early symptoms, to encephalitis lethargica, a disease which is very much in the popular mind at present, and an epidemic of the latter disease in England in 1918 was wrongly diagnosed as botulism, supposedly due to the war diet of the people. The onset of both diseases is acute. The first noticeable symptoms are similar, and consist of dimness of sight, often followed by coma. But there the resemblance ends. Encephalitis produces a slight rise of temperature; botulism usually does not. There are rarely two cases of encephalitis in the same household, while botulism usually affects at the beginning several people, all of whom have partaken of infected food. Finally, death from botulism usually occurs within four days, accompanied by varying symptoms, while encephalitis tends to produce prolonged coma, and to become in a sense chronic.

Ptomaine poisoning, which also may result from eating bad food, is not associated with the presence of the botulinus bacillus, but in the past, in the absence of exact methods of diagnosis, it often was confused with botulism. Figures for the United States show only 150 cases of botulism, with 97 deaths, in the whole history of the disease there.

Food containing the *Bacillus botulinus* may be either animal or vegetable, and in many cases the death rate from eating poisoned vegetable

products has been excessively high, due probably to the fact that preserved vegetables often are served raw, as in salad, while meats are more apt to be cooked, with a constant diminution of the virulence of the botulinus germ. German statistics of several epidemics show mortality in cases of consumption of infected vegetables to be as high as 52.3%, that from smoked meat and bacon being 19%, from sausage at 17%, from fish and lobsters only 10%, the mortality tending to diminish in proportion to the probability of the food being cooked before consumption. A curious fact in relation to the epidemics of botulism arising from the eating of poisoned olives is that in cases when the olives had been washed before they were eaten, the disease appeared in milder form, or did not attack those persons who had taken the precaution to wash their olives.

The sterilizing methods adopted by the corporations which distribute preserved foods seem largely to eliminate the possibility of botulinus infection. It is usually in the cases of products of isolated unscrupulous packers, or where foods which have been rejected by the original consignees are sold at low prices in second-rate stores that there is danger of botulism. The bacilli of this disease may develop in home-preserved foods through insufficient sterilization of the food or of the container; or through the use of faulty methods of excluding air from the sealed container, thereby allowing putrefaction.

The great majority of the commercially prepared foods are absolutely safe when they leave the packing plants; but the public should insist on getting undamaged containers, since even the best of these receptacles may be damaged by careless handling. The proportion of safety in tinned foods is shown strikingly by an experiment carried on at Harvard University, where a lunch club experimented over a period of 16 months with 1,750 cans of food. Absolutely no ill effects were discovered as a result of this investigation.

The botulinus bacilli are not found in raw foodstuffs, or in products which have been correctly prepared. Observance of scrupulous care in preserving food for future consumption eliminates the possibility of the spreading of botulism, which, while it fortunately is not of frequent occurrence, nevertheless is one of those maladies with which medical science has not yet definitely learned to cope.

INDIANS AND HEALTH.—Times have certainly changed. It wasn't so many years ago that when a crowd of Sioux Indians got together of an afternoon there was usually a considerable amount of battle, murder and sudden death in the air. According to the story books, the proceedings usually opened with firewater and scalping, and closed with an entertainment in which a paleface tied to a stake was the chief performer.

But nowadays things are different. When the Sioux Indians in Minnesota get together it is to listen to public health lectures delivered in

their own language, and frequently by members of their own tribe. There is a great deal of tuberculosis among these Indians, and the American Red Cross is endeavoring by means of these lectures to educate them in preventative measures against the disease. One old chief, Two Hawks, is an eloquent lecturer for the Red Cross. And a certain squaw, who had never before appeared in public, prefaced her remarks with the statement that if her audience were not composed of ladies and gentlemen she wouldn't talk to them.

A hundred years ago it would have been a brave paleface who would have delivered a lecture to an audience of Sioux. Some such lectures were delivered, but they were usually in the nature of deathbed remarks. Today, however, the Indians look upon these things differently, and they are eager to learn all the good that the Red Cross can teach them.

PERSONALS.—Dr. THOMAS ARUNDEL (A. M. C., '97), one of the veterans of the world war, received the unusual distinction of being decorated by His Holiness, Pope Benedict XV, for war work in Italy. The decoration is a gold service cross known as "PRO ECCLESIA ET PONTIFICE," and was accompanied with a papal brief and diploma. Dr. Arundel spent some time in the hospitals in Paris and environs before going to Italy where he remained until the activities of the A. E. F. closed.

—Dr. CHARLES L. RUSSELL (A. M. C. '09), is Assistant Physician on the staff of the State Hospital at Utica, N. Y.

—Dr. AARON WEINBERG (A. M. C. '17), after finishing his term as interne in the Jersey City Hospital has established himself in general practice at 73 Avenue D, New York City.

DIED.—Dr. OTIS H. DECK (A. M. C. '94), died at his home in Herkimer, N. Y., on June 13, 1920, after a long illness.

In Memoriam

OTIS H. DECK, M. D.

Dr. OTIS H. DECK who graduated from the Albany Medical College in 1894, died at his home in Herkimer, N. Y., June 13, 1920, following an infection of the heart of long duration, probably contracted during excessive work in the epidemic of influenza.

Dr. Deck was born at Deck, N. Y., January 25, 1864, and after graduating from Fairfield Seminary began the study of medicine with Dr. H. H. Greene, and completed his studies at Albany. He served as interne in the Albany Hospital for six months, and then began practice in Herkimer, where he continued in active work for a quarter of a century. He was a member of the County and State Medical societies, an examiner in several insurance companies, and a member of the staff of the Herkimer Hospital. His widow and three children survive.

ALBANY MEDICAL ANNALS

Original Communications

THE ALBANY HOSPITAL TRAINING SCHOOL FOR NURSES—GRADUATION REPORT, 1920.

By SALLY JOHNSON,

Principal of the School.

Today brings the graduation of the twenty-first class from the Albany Hospital School for Nurses. We have reached our majority; it is larger than any other graduating class, numbering 45. The senior member of this class entered January 1, 1917, and from that time until now probably more nursing history has been made than during any other equal length of time since the Crimean War period.

During these three and one-half years (1) Red Cross Nursing Service increased its enrollment from 7,500 to 36,300 (five times as many); (2) the Army Nurse Corps increased its number from 150 to 3542 (25 times as many); (3) the Navy Nurse Corps numbered 160; in October, 1918, it reached 1,500, nearly ten times the original; (4) the Army School of Nursing was created during this period, the first papers going out in May, 1918, and by November 11th had 10,689 applications, 1,099 on duty, 567 ready for duty.

The Army assigned 18,000 nurses to active duty, 10,000 of this abroad, 8,000 at home. This sounds very statistical but is quite easy to remember.

The Red Cross multiplied its number by five, the Navy by ten, the Army by twenty-five. From our declaration of war to the

armistice was about eighteen months. We sent 1,000 a month into service; like all others, the majority preferred foreign service; the deduction is: 10,000 went over, 8,000 were at home.

Then during this period came the Vassar Training Camp, graduating 418 young women from its intensive preliminary course, and the activities of the Women's Council of National Defense enrolling hundreds of student nurse volunteers. Congress has passed the Army Reorganization Bill which has for one of its measures the relative rank for nurses in service. Then there has been the passage of our own Nurses' Bill, and certainly the experience of the influenza epidemic is a matter of history, and a matter of real history is the fact that the Rockefeller Foundation has inclined an ear to the needs of nursing education. There has been the inspiration of the Nightingale Centennial. The growth of Public Health Nursing has been cyclopean. There has been a concentrated effort to bring about an eight-hour day for student nurses, to the end that students may really have time to take advantage of the teaching done in the schools.

During these three years there have been two very sad historic events, the passing of Miss Delano, the Director of the R. C. N. S., and of Miss Palmer, the editor of the *American Journal of Nursing*.

Never is a teacher more conscious of his or her limitations than when attempting to convey to a class of students something of the inspiration to be found from close association with the leaders of the profession.

And during the three years this Albany Hospital School for Nurses has had very personal losses. The speaker regrets her inability to adequately express what the school has lost because of the death of Mr. Lansing and of Mr. Olcott. They were interested in the student nurses, and showed it. Mr. Lansing seldom came to the hospital without coming into the Training School office. It was he who several times a year gave the pupils dozens of tickets to various entertainments. But above all, it was he who played the largest part in making the Nurses' Home possible. His was the sympathetic ear for the troubles and the aspirations of the School.

Mr. Olcott was of a different nature; he practically never came into the office, but when business called him to the hospital, and he tarried at the front, his manner invited the telling of training school progress. It was Mr. Olcott who gave the Chief Nurses of Base Hospital 33 several hundred dollars to be spent for the comfort of the nurses or to meet any emergency that might arise among them. It was Mr. Olcott who gave year after year the one scholarship which the school has. Only a few days before his death, a letter went out from the Principal asking Mr. Olcott if he wished to give this scholarship for the coming year. The next day a reply came, and it consisted of a check for the amount, and written above his signature across the face of the request was one word, "Certainly." That one word from Mr. Olcott was more eloquent than pages of rhetoric from many another man.

The first warm days mean commencement time is approaching, the school year is ending and faculties begin to take account of what has been accomplished during the past year. Were this faculty alone in its feeling that little progress had been made it would be discouraging, indeed, but others have felt the limitations of the reconstruction period. With the present money and labor situation few institutions have made daring ventures.

To this School, back to pre-war times has meant: (1) the return of men to the teaching staff: Dr. Hawn, Dr. Shaw, Dr. Gorham, Dr. James Vander Veer, Dr. Donhauser, Dr. Southwell; (2) a fuller class schedule; (3) a more active operating room service; (4) a larger dispensary service; (5) a larger number of private patients. On the whole, it means getting this great hospital team back into civilian working harness. The harness chafes a little when the load gets too heavy for this or that department. Generally the wound is superficial, and thanks to the healthy foundation the work and workers go on, not as well as might be wished, nor as well as it could and would were there more hands, but still relieving the physical and mental ills of some 5,000 patients every year.

And there is the call of that great body of sick that never gets into a hospital. The call for public health nurses is constant,

and louder, and though hundreds are answering, the cry is more, yet more. Therefore it seems only just to the community as well as only just to the pupils to continue our affiliation with the Guild of Public Health Nursing. There are two affiliations with the Guild and to date twenty-four pupils have had the course.

Last year the necessity of more maternity experience was prophesied. That need became acute, and the really new development of the year has been the opening of two affiliations with Brady Maternity. The course is of three months' duration, and by midsummer four students will, in all probability, possess the certificate of that school.

In this hospital the number of children is far too small to furnish adequate experience to so large a number of pupils in that very important branch of nursing, the care of sick children. An effort has been made to strengthen the theoretical course by borrowing from a neighboring institution, but it is clinical material that is needed. Perhaps in a not far distant future state aid will come to Schools of Nursing and dreamers see in Albany a School of Nursing with the academic work centering at the State College, the laboratory or practical work at the Albany Hospital, Brady Maternity, Child's Hospital, and St. Margaret's. Can you imagine a course more comprehensive than this might be, a course so managed that at the end of five years a young woman would receive a degree, probably B. S., and also her diploma as a fully trained nurse? It is done elsewhere. Why not here?

However good our school, however progressive our methods, nothing can equal in importance and interest the achievement of our graduate body. To them more than anybody else must we look for encouragement, assistance and loyalty. On them rests the prestige of the school, and we are at their mercy. They must set the example of regarding nursing as a profession and a means of service as well as a means of livelihood, as a calling rather than as a trade. Dr. Beard of the University of Minnesota writes in an article, "The spirit of commercialism is not only in business but it is in medicine and in nursing. Both professions need to take full measure and meaning of their service to human life and human health, a service which must never be

denied within the limits of personal capacity, whether the price it fitly commands is forthcoming or not; and if there is loss, that loss is a contribution which all worthy citizens must make to the public good."

Between this graduate body and this school there exists a kindly feeling, a sympathetic interest, an appreciation of each other's problems and merits, and a frankness which make for loyalty and progress.

The more important side, the *spirit* of the relation is not tangible; but the material side is tangible, and we have evidence of this in the fifty lockers for the use of nurses on special duty in the hospital.

These nurses very rightly could have expected the hospital to provide a safe and suitable place for their belongings. This would have meant a heavy expense to the hospital then staggering under a particularly large financial burden.

The Alumnae gave a bazaar which not only netted the \$500 needed for the lockers but also provided the nucleus of a sum which has been the means of changing the five reception rooms of the Nurses' Home so that, instead of bearing the aspect familiar to Judy Abbot, they now have the atmosphere befitting the reception rooms of a dignified school for girls.

During the last month a survey of the nursing activity of the graduates has been made and the results are interesting. The next pupil to finish her course is the president of the graduating class and she will be the 500th graduate of this school. Of this number eighteen have died; of sixteen we could get no information; twenty have retired because of illness or other reasons; only four have taken up work foreign to nursing; 180, or a little over one-third, have married.

This removes from the nursing field 238, approximately one-half of the graduates. Of the 261 in the field, 165, or two-thirds, are doing private nursing (eighty-four, or one-half, in Albany); forty-two are doing institutional work; twenty-eight public health with school nursing predominating; thirteen in Army and Navy; thirteen doing some special form of nursing. Among those listed under special form of nursing are found:

An Assistant Professor of Public Health Nursing,

A Nurse Missionary, field in Arizona,
 Instructor in State Laboratory,
 An Historian,
 And five students take courses at colleges.

It has been most difficult to get information pertaining to war service. The number is probably sixty or sixty-five, with one-half of that number serving overseas. This means about one out of every four graduates in service. In closing this survey it is most fitting to pay tribute to Miss Nance Tupper Cameron, a member of the first graduating class whose war service was distinguished. We would that this report were fuller, but the following information is authentic.

Miss Cameron's active service started in the big training camps on Salisbury Plains. Later she went on to France where she served months in hospitals, and also in the casualty clearing stations. After this she was made matron of a hospital transport which made many trips bringing wounded from England to Canada. Just before the armistice was signed Miss Cameron was invalided home. Since she was cited to Buckingham Palace and decorated with the Royal Red Cross by the King of England and then was summoned on to Windsor Castle where she was received and commended by Queen Alexandra.

Such, then, is the history of nurses under the pressure of war. Many of us there found splendid latent qualities which we never knew we possessed.

May we see to it that these qualities do not return to their dormant state, because the war stimulus is removed. For we are in desperate need of these qualities for the problems of today. (1) We need self *sacrifice*, lest we allow our individual need to overshadow the need of the whole profession; (2) we need *loyalty* to the profession, believing in it, working to better it; (3) we need *bravery*, to defend the standards so painfully obtained against the attacks of those who would break them down; (4) we need to keep a level head to keep our eye on the goal and hew to the line, for these are troublesome reconstruction times.

Let us make just as much of a business of remedying the problems peculiar to this period as we made a business of remedying those problems peculiar to the war, to the end that the Albany Hospital School for Nurses may go not only on but *up*.

THE ALBANY HOSPITAL TRAINING SCHOOL FOR NURSES.

[EDITOR'S NOTE: The following historical sketch of the school was prepared for the *Albany Argus* by Miss SALLY JOHNSON, Superintendent and Principal of the School from January 1, 1917 to August 1, 1920, when she resigned to accept the office of Superintendent of Nurses of the Massachusetts General Hospital in Boston. The record of the Albany Hospital School is so accurate and so illustrative of the excellence of this institution that it is reprinted for permanency as a professional achievement and as an indication of the progress of the last twenty years in Albany medicine.]

It is astonishing how soon after an enterprise is fully launched and is really functioning all traces of the very beginning of that enterprise seem to disappear. This is true, unless some far-seeing person puts these beginnings on paper. From notes made by Dr. Albert Vander Veer it has been possible to obtain information concerning the early days of the Albany Hospital Training School for Nurses.

On June 1, 1896, the medical staff of the Albany Hospital sent a letter to the governing board asking for improvements in the old hospital building, the building now occupied by the Humane Society and located on Eagle street. In this letter the prevailing system of nursing was discussed. There was no school, the nurses were all on salary, trained and untrained. For the sake of economy the number of nurses was small and their salaries were small. While there were good nurses among the number, the system did not make for efficient nursing. After discussion it was decided that the establishing of a training school for nurses would solve the problem. To that end a circular letter was sent out.

The response was not only large, but prompt, as the school was organized in December, 1896, and incorporated the following April.

The organization was particularly fortunate in securing for the founder of the school Miss Emily McDonnell, who came well equipped for the task. Miss McDonnell was a graduate of the Johns Hopkins Training School, trained under the marvelous woman, Mrs. Isabel Hampton Robb. She herself had been

instructor in some of the most prominent hospitals in the United States and Canada. To this professional preparation were added personal qualities of refinement, dignity and poise. The successors of Miss McDonnell have always blessed her for the quality of the foundation she built for the Albany Training School.

The school leaflet published in October, 1897, gives a very complete report of the school organization:

Managers—Mrs. William L. Learned, president; Mrs. Frederick Townsend, vice-president; Mrs. Luther Tucker, secretary; Miss Abby S. Lansing, treasurer; Mrs. B. W. Arnold, Mrs. Samuel Hand, Mrs. E. R. Hun, Mrs. Charles R. Knowles, Miss Abby S. Lansing, Mrs. William L. Learned, Mrs. Frederick Townsend, Miss Jessie K. Myers, Miss Sarah B. Potts, Mrs. Luther Tucker, Mrs. J. W. Tillinghast, Mrs. Albert Vander Veer, Mrs. William Appleton, Mrs. A. B. Banks and Mrs. W. W. Byington.

Patronesses.—Miss Jessie K. Myers, Mrs. Wm. H. McClure, Mrs. G. D. Miller, Mrs. S. L. Munson, Mrs. O. M. Benedict, Mrs. A. N. Brady, Miss Barnard, Mrs. A. V. Bensen, Mrs. S. S. Bullions, Mrs. C. T. Durant, Mrs. J. A. Delehanty, Mrs. Lewis Dietz, Mrs. M. T. Hun, Mrs. Samuel Hand, Mrs. Henry Hun, Mrs. Dexter Hunter, Mrs. J. H. King, Mrs. C. R. Knowles, Mrs. Wm. L. Learned, Mrs. J. T. Lansing, Mrs. Abraham Lansing, Mrs. C. B. Lansing, Miss A. S. Lansing, Miss S. Y. Lansing, Mrs. G. Michaelis, Mrs. R. E. Oliver, Mrs. R. C. Pruyn, Mrs. Charles L. Pruyn, Miss Potts, Mrs. Joel R. Reed, Mrs. S. W. Rosendale, Mrs. Frances Shields, Mrs. Grange Sard, Miss Emily D. Sumner, Miss J. Sumner, Miss S. Sumner, Mrs. Julius Saul, Mrs. Frederick Townsend, Mrs. J. W. Tillinghast, Mrs. L. H. Tucker, Mrs. A. Vander Veer, Mrs. W. B. Van Rensselaer, Mrs. Wm. J. Walker, Miss Mabel Wiles, Mrs. C. P. Williams and Mrs. Horace G. Young. Superintendent of nurses and nursing, Miss Emily McDonnell.

Lecturers.—A. Vander Veer, M. D., Samuel B. Ward, M. D., Henry Hun, M. D., John M. Bigelow, M. D., James P. Boyd, M. D., Wm. Hailes, M. D., C. S. Merrill, M. D., F. C. Curtis,

M. D., S. R. Morrow, M. D., Joseph D. Craig, M. D., H. Van Rensselaer, M. D., W. G. McDonald, M. D., Herman Bendell, M. D., George Blumer, M. D., A. MacFarlane, M. D., E. A. Bartlett, M. D., and J. M. Mosher, M. D.

THREE PUPILS AT FIRST.

In January, 1897, the first pupils arrived. Three young women who had been doing nursing in the hospital before the organization of the school joined this first class, and were given a year's credit for their previous work, therefore graduating after two years in the school.

In May, 1899, part of the buildings of the new hospital on New Scotland avenue were ready for occupancy and the patients were transferred to Pavilion B. With the patients came the school of 23 pupils. During the next two years the number of pupils grew to 88.

There were 14 graduates in the first class. Judge Learned presided at the graduation exercises. Dr. Albert Vander Veer represented the medical staff, and the main address was given by no less a nursing personage than Mrs. Hampton Robb, at that time superintendent of nurses at Johns Hopkins Hospital.

MISS CAMERON IN THE WAR.

In this first class was Miss Nancy Cameron, whose record in the recent war warrants special mention. Miss Cameron's active service began in the big training camps on Salisbury Plains. Later she went into France, where she served for months in hospitals, and also in the casualty clearing stations. After this she was made matron of a hospital transport upon which she made many trips bringing wounded from England to Canada, crossing and re-crossing during the most perilous time. Just before the armistice was signed Miss Cameron was invalided home. Later she was cited to Buckingham Palace and decorated with the Royal Red Cross by the King of England and then was summoned to Windsor Castle, where she was received and commended by Queen Alexandra.

Very soon after the new hospital was completed the county began building Pavilion F for the care of the mentally ill. This

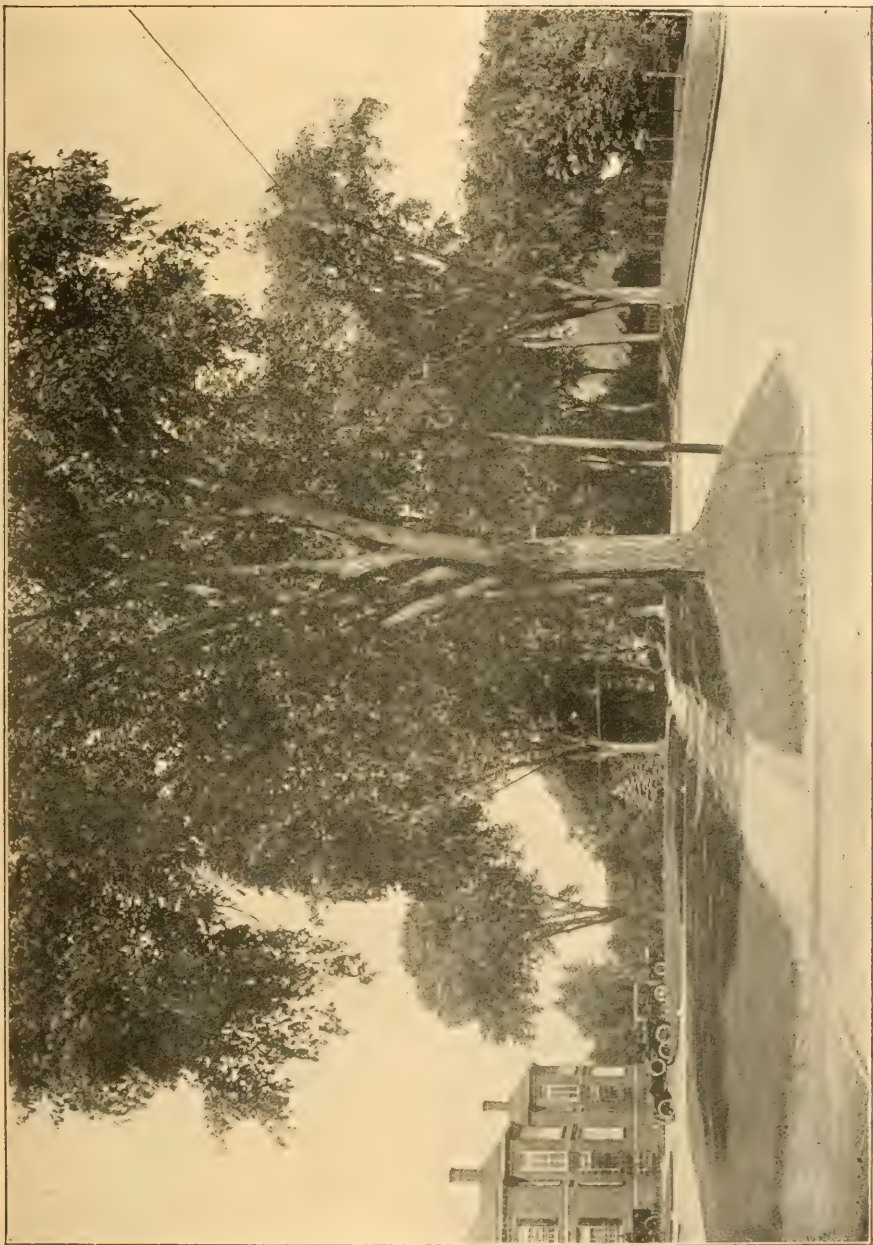
building was opened for the reception of patients in February, 1902. About two years later an addition was built. The lower floor is for women and the upper for men. Each floor is arranged so that the sickest patients may be away from the convalescent and there is provision for both private and ward patients in each section. There have been 5,393 patients admitted to that pavilion since its opening. There were 353 last year. Statistics show that nearly one-half of the patients have been discharged with health restored.

Here is one of the few instances where a general hospital has a mental department. The nurse graduating from this school is particularly fortunate in having had three months' training in this almost untouched branch of nursing. It adds to the usefulness of a nurse if she can comprehend mental illness as well as physical illness. And what physical illness is without its mental symptoms of depression, delirium, excitement, neurasthenia, paranoia, and other psychoses? But perhaps the most valuable part is the ability of the nurse with mental training to do preventive work when she gets out into the world; to caution the ambitious mother against pushing her nervous child to skip a grade; to tell the young girl graduate that to be valedictorian may be a heavy price to pay for mental health; to persuade the older woman to share some of her cares with others before it is too late; to interpret some of the mental disorders of old age and so prevent some of the unhappiness of this condition.

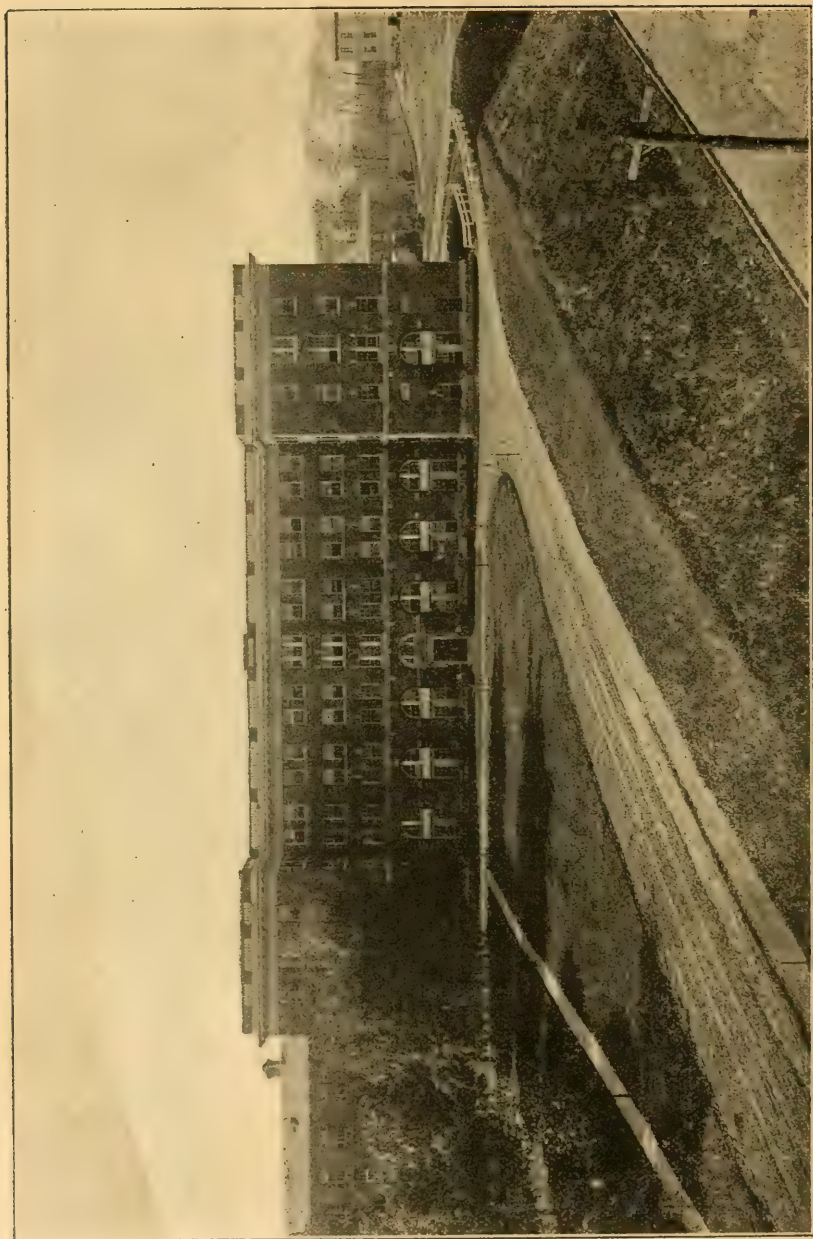
METHODS ARE ADVANCED.

No mental hospital in the United States is farther, in method of care, from the prehistoric days of "custodial care" than Pavilion F. There is probably more gratitude expressed by patients' friends for nursing care given in this department than in any other one department of the hospital.

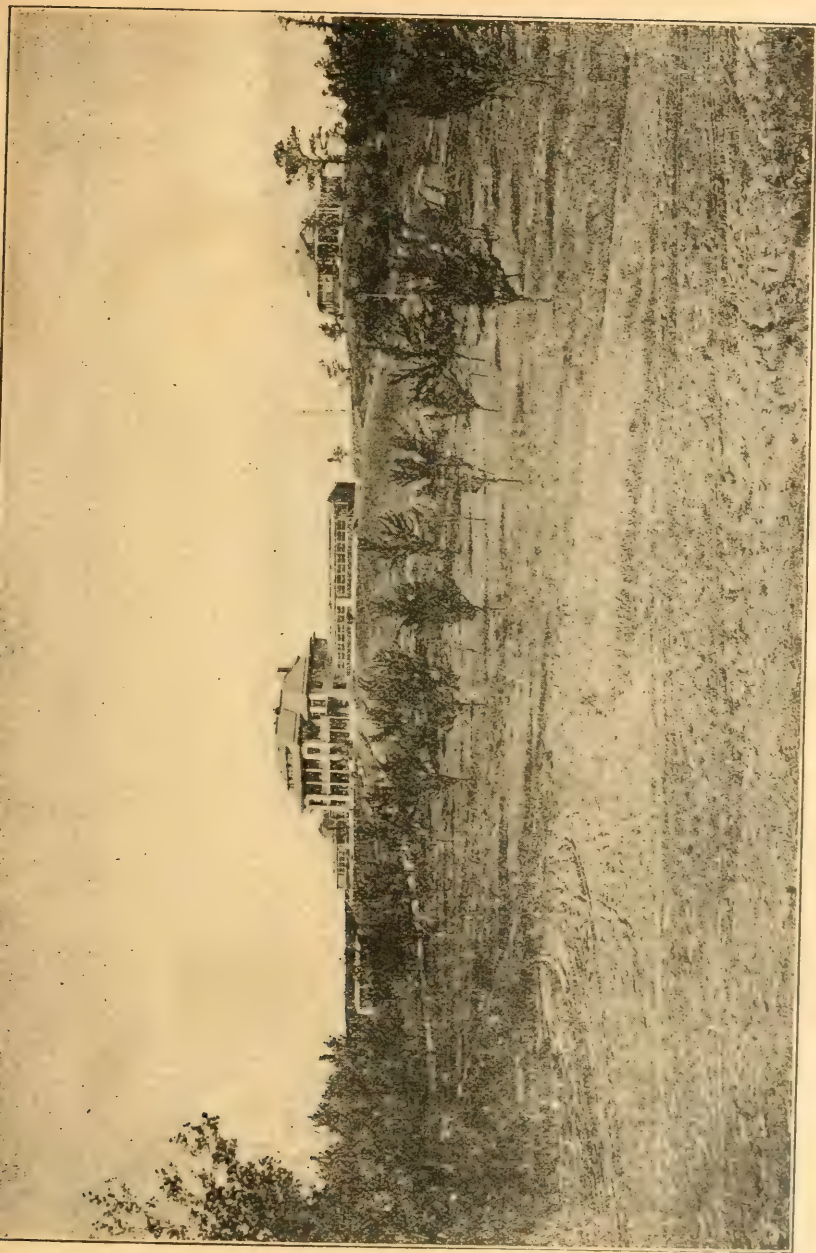
In March, 1906, Pavilion G, the pavilion for contagious diseases built by the city, was ready for occupancy and the training school took over the nursing. During the summer of 1918 the second floor of the building was finished off. On the ground floor are the kitchen, sterilizing room, fumigating rooms and



APPROACH TO ALBANY HOSPITAL



NEW BUILDING FOR NURSES, ALBANY HOSPITAL



SHACKS

THE TUBERCULOSIS SANATORIUM
ALBANY HOSPITAL

NURSES' BUNGALOW



A CORNER OF THE PRACTICAL NURSING CLASS ROOM, ALBANY HOSPITAL.

employees' rooms. On the main floor will be found the office, four corridors and detention room. One-half of the newly finished floor is given over to a large and small ward for women, and another large and small ward for men. The other half comprises the supervisor's suite, nurses' dining room, recreation room, and sleeping rooms. This upper ward is designated "for the prevailing contagious disease" and was ready just before the great influenza epidemic. During this last year it has twice been filled to nearly capacity with influenza patients and once with mumps patients. The latter came from the Albany Orphan Asylum. These young visitors were much enjoyed, and while no misfortune is wished on a neighbor, these youngsters would be welcome again.

The number of patients in this pavilion is usually small and gives just enough clinical material for teaching the nursing care of these diseases without the responsibility of the department being a burden. Very few graduates have this experience as a part of their general training and the school is glad to have it for its pupils.

In 1906 Miss McDonnell resigned, having given nine years of constructive and progressive work to the school. She was succeeded by Mrs. E. M. Simpson, another graduate of the Johns Hopkins Training School for Nurses.

ORGANIZATION CHANGED.

In 1908 the organization of the Training School was changed. The hospital proper had been passing through financial difficulties. A committee from the board of governors of the hospital and from the board of managers of the Training School were of the opinion that possibly greater economy could be secured, and the hospital be more efficiently administered, if there were but one organization. Appreciating the wisdom of this suggested consolidation, the managers requested the governors to assume their duties. At this time Mrs. Simpson resigned.

In the same year, 1908, Miss Susan Hearle, a graduate of the Philadelphia General Hospital and for 13 years superintendent of nurses at the Jefferson Hospital, Philadelphia, came to take charge of this school.

TUBERCULOUS PATIENTS. .

During the spring of 1909 patients ill with tuberculosis were cared for in a group of tents pitched out by Pavilion G. The winter found them housed in Ward E, which is still the admitting ward for this type of patient. In the spring of 1910 these patients were moved out to what is now the farmhouse on the sanatorium property. The farmhouse was supplemented by tents, and hence the present name, "The Camps." In this same year, 1910, the central part of the present building was ready for occupancy and the patients moved in. A seven-room bungalow was also ready for the pupil nurses. Later wings were built to the main building, and still later a long, low building for men patients, called "The Shacks." In 1917 patients were admitted until there was actually overcrowding; the number for some time has been around 50, which presents quite a different situation.

About the first thing that happens to a hospital plant is to find the nurses' home inadequate as to capacity. The original nurses' building of the Albany Hospital was planned to house 35 nurses and 35 employees. In these early years there were 88 nurses. The employees were soon moved out, the dining room was relegated to the basement, that the former dining room might be used for a dormitory, and then came the finishing off of the top of the ambulance barn for the use of nurses.

Early in 1913 the question of suitably housing nurses became critical. Previous to this time two gifts had been made for this specific purpose. Although this sum was only a nucleus, the governors, notably Mr. Lansing, determined to build a new home. On December 31, 1913, the president of the board of governors called a meeting of the board to inspect the new home in the process of construction. On May 24, 1914, the formal opening took place.

The school is particularly fortunate in having this new residence. It is a five-story building connected with the hospital by two enclosed corridors. In the building are 150 single rooms. The building also contains a large recreation or lecture hall, a large dining room which seats 180 persons at small tables, six reception rooms and two classrooms. There are also ample

bathing facilities and a small laundry and kitchen for the use of students.

TAUGHT ELEMENTARY BACTERIOLOGY.

During 1916 and 1917 the top floor of the old nurses' building was remodelled into a pathological laboratory for the use of the hospital and medical school. In this laboratory the pupil nurses are taught elementary bacteriology. At about the same time a part of the second floor was remodelled to make more room for the hospital records, and for offices of the medical staff.

In October, 1916, after eight years as head of the school in this large and complicated hospital, Miss Hearle resigned her position to take another position in central New York as superintendent of a hospital. On January, 1917, Miss Sally Johnson was appointed superintendent of nurses.

Upon the actual declaration of war, the governors of the Albany Hospital offered the services of the hospital to the government. This offer took the form of a base hospital unit for service overseas and resulted in early authorization by the government to organize a unit under the direction of the American Red Cross. Dr. Arthur W. Elting was elected director of the unit, Miss Johnson as chief nurse and Miss Washburn as alternate chief nurse.

An active campaign began to obtain the necessary personnel and equipment. Sixty-five nurses from Albany, Schenectady and vicinity were enrolled. The active work of the organization began in May, 1917, and on August 23 the American Red Cross certified to the war department that this unit was ready for service. Several groups of nurses were ordered to cantonments for temporary duty while waiting for mobilization of the unit.

WENT OVERSEAS.

It was decided that Miss Washburn should go in charge of the unit, and on February 22, 1918, the nurses reported to Ellis Island, New York. On May 2, under the command of Lieut.-Col. Von Shrader, the nurses joined the officers and male personnel and embarked on the S.S. *Carmania* for transportation

overseas. The story of the unit would be material for another article and will not be chronicled here. Suffice it to say that a year later, February 24, 1919, when the *S. S. Olympic* docked at Pier 59, New York City, she brought back the organization known to Albany as "Base 33."

On July 1, 1918, Miss Johnson, the superintendent of the school, was released for five months to enter the service in the Army School of Nursing as a director of a school and was assigned to duty at the Walter Reed General Hospital, Washington, D. C.

It has been difficult to get the exact record of the nurses in the service. The number is probably 66, or about one fourth of the total number of graduates still in the nursing field. About one half of this number served overseas.

PUBLIC HEALTH NURSING.

When the National Organization of Public Health Nursing was created some eight years ago, one of its avowed objects was to help a given community to feel the need of a public health nurse in that community. At the last meeting of the national organization the president said:

"So receptive, in fact so eager and waiting, was the public found to be for this idea of the public health nurse that in 1916 the organization found it had worked itself out of that section of its program. There was no need of further stimulation, for the demand for nurses far exceeded the supply of properly qualified public health nurses with a continued emphasis on standards and the extension of the scope of public health nursing activities."

About the middle of the period just mentioned the Albany Guild for the Care of the Sick contemplated changing its scope of work and reorganized as the Albany Guild of Public Health Nursing, thus becoming an accredited organization for giving special training in this branch of the work.

In the early part of 1918, the call for public health nurses came loud and often. Young women who entered training expressed a desire to take up this branch of work after graduation. It seemed that a school of this size owed, not only to its pupils,

but also to the community, some preparation for this work. Therefore during the third year of training a two months' course with the guild was made an elective. In September, 1918, the first two students began this affiliation and to date 24 students have had the course.

It is not strange to find this school particularly interested in public health nursing, for its most widely known graduate is Miss Anne Hervey Strong, who is one of the leaders in this branch of work. Miss Strong, who is a sister of Mrs. C. N. Gilberts, of Hudson avenue, received her A. B. from Bryn Mawr, entered the Albany Hospital Training School, graduated in one of the early classes and remained for two years as supervisor and instructor. From 1914 to 1916 Miss Strong was at Teachers' College in the department of nursing and health as instructor of public health nursing. In 1916, the School of Public Health Nursing was opened at Simmons College and Miss Strong went there as director and with the status of assistant professor, and during 1919-1920 was also associate professor at Teachers College. In 1918 Miss Strong was made full professor of public health nursing at Simmons College.

In 1919 a "committee for the study of public health nursing education" was established under the auspices of the Rockefeller Foundation and financed by the Foundation. Dr. C. E. A. Winslow is chairman and Miss Josephine Goldmark is secretary. Miss Strong was given a year's leave of absence from Simmons College to be assistant secretary of this committee. The work of this committee is a field study of public health nurses at work under public and private agencies, in rural and urban communities, and in various parts of the country; and also with a study of the preparation afforded for this work by hospital training schools and post-graduate courses.

To return to the school. It must be plain to even the casual reader that the Albany Hospital offers experience in every branch of nursing: medical, surgical, gynecological, obstetrical, psychiatric, pediatric, contagious, and public health. The hospital wards also furnish experience in the care of patients in the special departments of ophthalmology, otology, rhinology and

laryngology. These departments are not as equally balanced, however, as might be desired for teaching purposes.

As in most hospitals, surgical patients predominate. During the week just finished the operations numbered 72. Patients with medical diseases can be cared for in their own homes with comparative ease. The duration of these diseases is often long, the convalescence even longer, and so many medical patients never seek hospital care. Better sanitation and prophylaxis have reduced the number of typhoid fever patients. Fifty years ago it was not uncommon to find 10 typhoid fever patients in the men's ward of a large general hospital, and as many more in the women's ward; today three such patients is generally the maximum. Many of the medical patients of this hospital come for the metabolism studies that can be made in conjunction with the diet and pathological laboratories.

NEEDS OF MATERNITY DEPARTMENT.

During a large part of the past year the senior class numbered 49. It was impossible to give sufficient maternity training to that number of pupils in this hospital, and therefore on December 1, 1919, one affiliation was made with the Brady maternity, and on February 15, 1920, a second was made. Five students will soon have the certificate of that school.

The great needs of the maternity department of the Albany Hospital are reconstruction and additions, in order to procure more moderate priced rooms and a better arrangement of utility rooms, case rooms and nursery. Until this was done the school will need to continue supplementing this experience by affiliation.

The children's service is the service which most needs strengthening. It is decidedly limited as a teaching field. This is partly a matter of construction and equipment, and partly due to the fact that there are other institutions in the city which make a specialty of giving excellent care to sick children.

The theoretical instruction is given by members of the faculty of the school, and by members of the medical staff of the hospital, every member of the latter being a member of the teaching staff of the Albany Medical College. Dr. Curtis and Dr. Mosher

have lectured continuously since the foundation of the school. There is one full-time nurse instructor. The first year subjects are Ethics and History of Nursing, Practical Nursing, Drugs and Solutions, Hygiene, Serving of Diets, Anatomy and Physiology, Bacteriology, Dietetics, Urine Analysis, and Bandaging. In the second year come lectures and classes in Materia Medica, Surgical Diseases, Medical Diseases, Gynecology, Communicable Diseases, Mental and Nervous Diseases, Obstetrics and Advanced Practical Nursing. In the third year are lectures and classes in Dermatology, Diseases of Ear, Eye, Nose and Throat, Pediatrics, Emergencies, Orthopedics, Massage, and a second course in Ethics, History of Nursing and Graduate Opportunities.

Such, then, is the development of the Albany Hospital Training School and Outline of its present course, a course of instruction which any well recommended young woman of 18 years who has had two years of high school may obtain at small financial expenditure.

MANY PUPILS IN TRAINING.

There are hundreds of other schools whose requirements are similar, yet the medical and nursing journals, graduation addresses and the press all decry the shortage of applicants to training schools. However, figures indicate that there are more pupils in training than ever before. There never has been an adequate supply of pupil nurses. Today the hospitals need more nurses for the given number of patients than formerly. Years ago pupils worked 10 hours out of the 12 by day (with all classes and study added), having one-half day off duty each week and four hours on Sunday, and worked 12 hours on night duty, sometimes for periods of three consecutive months.

Now the average school has its day down to an average of eight and a quarter hours, although still carrying a 12-hour night for a period of six weeks. The most progressive schools are on a 54-hour week, which includes night duty on the same basis. During recent years there have developed intricate and time-consuming methods of feeding patients, innumerable examinations, consultations, and experimental procedures. The proportion of private patients is on the increase, partly because of the in-

creased appreciation of hospital care and partly because of the present difficulty of keeping a home functioning during the time of illness. For these reasons the "shortage of pupils" is not entirely an actual shortage, but a relative one, but this fact does not make the real need of pupils any the less acute.

Until recently it was the exception for a member of a given community to experience difficulty in obtaining a nurse from the nearby hospital or the registry. Now it is almost the exception if one is obtained. The first reaction is to blame the hospital or the registry, when in reality neither is to blame. The hospital will gladly prepare all the well qualified young women the community will send. Classes are larger every year and one wonders where they all go.

To administrators of training schools one of the most encouraging occurrences of the year has been the "Conference on the Training of Nurses" called by the Rockefeller Foundation and held at Hotel Commodore, New York, in February. Men and women interested in nurse education came from all parts of the United States and two from Canada. The outcome of this conference was the continuing and enlarging of their committee (the committee previously referred to in this article), which is now studying the public health nursing field that it may also study the question of preparation for other branches of nursing. It is fervently believed that the findings of this committee will be of immeasurable value to every school of nursing in the country and through the training school be of invaluable service to the sick, for the end result of a better school in a given community is the better care of the sick in that community.

Here are evidences that the State Universities and a Foundation interested in matters of education are realizing that the preparation of a nurse needs a solid theoretical foundation and that her preparation cannot be a by-product of hospital management. May every year see increasing evidence of this realization.

Correspondence

THE NEW YORK STATE

COMMISSION FOR THE BLIND

June 15, 1920.

Dr. J. M. MOSHER, *Editor, Medical Annals, Albany.*

My dear Dr. Mosher: I am enclosing an article on a registration of the blind in your county, and one which we shall appreciate your cooperation in helping us to bring before the public.

According to the percentage of blind persons to the population of any community, estimated as one in every 1,000, there must be a considerable number of blind persons in your county.

The State Commission for the Blind hopes to organize a local Committee for the Blind in all sections of the State where a census proves the need to exist. As a rule, there is no lack of sympathy on the part of the public for blind people, but there is a great deal of ignorance which we hope to overcome and this cannot be done without your assistance.

If you can conveniently give this article editorial mention, your own civic interest which this will indicate will in itself carry weight.

Mr. Charles Cooper, our census representative, will be in Albany County shortly in connection with this registration. Any further assistance which you can give him in presenting this to your readers will be greatly appreciated.

Sincerely yours,

GRACE S. HARPER,

Secretary.

THE BLIND—THEIR BIRTHRIGHT.

"We, the blind, need only the opportunity to fill the places we are fitted to fill. We would have our blindness looked upon as a handicap and not as an affliction."

For such persons to sit idle with folded hands is killing, bodily, mentally and spiritually; soul destroying. They do not wish to be supported, to be taken care of for the rest of their lives—what they want is a fair opportunity to earn a living—to be

given an equal chance, with their sighted fellows, and live their life as normal beings should. *This is their birthright.*

To such, the visits of a Home Teacher who is also blind, are an unqualified blessing. The Home Teacher brings instruction in reading and writing of raised type, and opens up infinite resources for mental and material help. She establishes a connection with circulating libraries for the blind and teaches industrial work in the homes, which can be sold at market prices.

This is only one phase of help open to the blind—there is also that of employment—likewise help in securing medical examination and treatment, as well as many other opportunities when needed but which limited space prevents mention of here.

In order that more blind persons may receive the benefits of the Home Teacher-Nurse or Employment Worker, a campaign to secure the registration of all of the blind and partially blind in this State is being conducted by the Albany Association of the Blind, 105 Lancaster St., Albany, N. Y., in cooperation with the New York State Commission for the Blind.

Please send the *name, correct address and age* of any blind or partially blind person (adult or child) known to you, to the Albany Association of the Blind, 105 Lancaster St., Albany, N. Y.

Children with defective vision or adults who are losing their eyesight should be reported as well as those who are totally blind.

Even if blind people known to you may not need the services of any of these workers now, the Commission would like to have their names and addresses in order to send them, free of charge, a quarterly Bulletin which contains many items of interest to the blind.

ALBANY ASSOCIATION OF THE BLIND,

105 Lancaster St., Albany, N. Y.

THE PHYSICIANS' HOME.

President—Robert T. Morris, M. D. *Vice-President*—Ralph Waldo, M. D.
Secretary—Silas F. Hallock, M. L. 36 East 65th Street, New York City.
Treasurer—Albert G. Weed, M. D., 152 West 57th Street New York City.
Incorporators—Dr. Daniel Cook, Dr. Warren Coleman, Dr. Max Einhorn, Dr. Wolff
 Freudenthal, Dr. Silas F. Hallock, Dr. Graeme M. Hammond, Dr. Francis Huber,
 Dr. Robert T. Morris, Mr. Stuart G. Nelson, Dr. H. M. Silver, Dr. Alexander
 Trautman, Dr. George E. Steel, Dr. Ralph Waldo, Dr. Albert G. Weed, Mr.
 Justice Bartow S. Weeks, Dr. John E. Welch.

Dear Doctor:

In February we sent out a circular describing the Physicians' Home. We stated the need for such an institution for physicians who had reached the evening of professional life and who had been so little mercenary that they were now dependent upon others for their support.

Responses to the letter were of several kinds. Some doctors promptly sent a remittance of ten dollars and asked to be enrolled among the annual contributors. Others made contribution in larger amount. Some doctors expressed a willingness to take up the question with their patients in the interest of large endowment. One physician has offered thirty-eight acres of land on Long Island as soon as the membership reaches one thousand. A number of women physicians wrote asking if they might become contributors and if they would be eligible for entrance to the Home. Several Homeopathsists asked the same question. The idea of the Home is to shelter any legalized practitioner of medicine when the need for shelter comes and the days of controversy and dispute are past. A number of letters were received from physicians in need of the Home and some of the names would cause surprise if they were to be made public. Many questions were asked concerning the desirability of having the Home in or near New York City. The central home will be in New York State because of charter requirements, but according to our plans self-governing branches will be established in the South and West, at the seashore and in the mountains. There is nothing in the charter to stand in the way of branches of the Home being established under sunny skies and among pleasant surroundings, and there are no rules to prevent any member from catching a three-pound bass or making a decent

drive on the golf links when he is not reading about Marcus Aurelius or putting up his botanical specimens.

At the meeting of the House of Delegates of the New York State Medical Society on March 8, 1920, a unanimous vote of approval was given to the project.

One of our outlooks is toward making a merger of societies which already aim at giving relief to physicians or their widows in time of need. We plan to make these useful societies still more useful when working under the general jurisdiction of a central institution extending the idea of mutual helpfulness. The larger the mass unit the more powerful we shall be as a force for good in accordance with the laws of economics.

Laymen may become members in any class of contributors and we already have gifts and promises of gifts from laymen who feel kindly toward the medical profession.

Become an annual contributing member right now with a ten dollar subscription. If your means suffice, become a sustaining member. Write us in addition that you will ask your friends among the laymen to join in this project with contributions toward endowment and to make the Home the beneficiary of legacies in wills. Will you join us in this splendid work? Those of us who are giving time and money and thought to the cause are working without salary and at personal loss.

Fraternally yours,

ROBERT T. MORRIS,

President.

616 Madison Avenue, New York City.

Annual contributing member	\$10.00
Sustaining member	100.00
Life member	500.00
Patron	1,000.00
Donor	2,500.00
Benefactor	5,000.00

UNITED STATES PUBLIC HEALTH SERVICE

COOPERATING WITH THE

NEW YORK STATE DEPARTMENT OF HEALTH,
132 State Street, Albany, N. Y.

July 22, 1920.

Dear Doctor:

Attached is a letter recently written by Dr. Biggs, Commissioner of Health, which I think of such importance that I am sending a copy of it to every physician in the state.

Very truly yours,

JOS. S. LAWRENCE,

Chief, Bureau of Venereal Diseases, A. A. Surgeon.

Dear Doctor:

The rôle played by syphilis in the community life has been widely written and spoken about since the discoveries disclosed by the medical examining boards of the draft army. As physicians we have known for a long time that syphilis has been most ruthless each year in exacting its toll of wrecked families and defective children, but how serious this tragedy is has never been determined. Many tables have been prepared attempting to show the prevalence of syphilis, but owing to the small number of cases or to the restricted group from which the data was collected, these estimates have never been accepted as applicable to the general population.

The Lancet for May 26, 1917, contains an oration delivered by the late Sir William Osler before the Medical Society of London on "The Campaign Against Syphilis." This is a most excellent discussion of syphilis as a public health problem and should be read with profit by every practicing physician. His arraignment of syphilis as a destroyer of the infants is particularly drastic as is shown by these several quotations: "Syphilis is perhaps the most common cause of abortion." "When I was a pathologist and physician to an infant's home, we did not have—nor did we need—Schaudinn or Wassermann or Noguchi to tell us of what 95% of infants died during the first month. Jona-

than Hutchinson and Parrott and Diday and Fournier had told us that." Osler estimated that at least 20% of the still births and between 15,000 and 20,000 of the 90,000 deaths of infants within the first year reported in England for the year 1915 were due directly to syphilis.

Dr. J. Whitridge Williams reported to the New York State Medical Society that among 4,000 (1,839 white, 2,161 black) consecutive deliveries in Johns Hopkins Hospital in the period preceding December 31, 1919, there were 302 foetal deaths. Careful study revealed that syphilis was the cause of 104, or 34.44%, of these deaths. It was the cause of 12.12%, or one of every eight, of the deaths among the whites and 45.23%, or almost half, the deaths among the blacks. Of these 4,000 mothers, 421 had a positive Wassermann reaction and antiluetic treatment was begun as early as possible. Some cases came under observation too late for the treatment to have any value, but some idea of the effects of antiluetic treatment can be observed if the patients be divided into three groups as follows:

I. In this class there were 157 women who received no treatment and 32% of the children were born dead or presented some evidence of syphilis.

II. In this class there were 103 women who received only two or three injections of salvarsan and no after treatment and 37% of the children were born dead.

III. In this class there were 163 women who received satisfactory treatment achieving a negative Wassermann and but 7.4% of the children were born dead.

Dr. Williams concludes, "The evidence at our disposal shows that if syphilis is recognized early in the pregnant woman, and is intensively and appropriately treated, almost ideal results may be obtained as far as the child is concerned."

In an article entitled, "Syphilis and Its Relation to Infant Mortality," appearing in a recent number of the *American Journal of Syphilis* for January, 1919, the author found in reviewing the literature that in a syphilitic family:

75% of all the offspring are infected.

30% of the pregnancies terminate in death at or before

term (a waste three times greater than is found in non-syphilitic families).

30% of all the living births die in infancy as compared to a normal rate of 15% in the same class.

These figures are startling, but must have some foundation in fact. If they are only partly true it is quite evident that we should do what we can to remedy the conditions which permit such destruction of our children. *It is generally conceded by syphilologists that the complement fixation (Wassermann) test of the blood is the best method of determining the presence of, acquired syphilis, and I, therefore, ask you in the future to submit to the State laboratory a specimen of blood from every woman in your practice who has an abortion, miscarriage or still-birth.*

The State laboratory at Albany and the branch laboratory at New York City are always willing to make these tests free of charge, for the physicians of the State. Outfits for collecting and submitting the blood can be procured of the health officer in the district or from the State laboratory. There are in certain parts of the State other laboratories approved by the State Department of Health where specimens can be sent, if that seems more desirable. If a specimen of blood is sent as a matter of routine from every such case, there can be no suspicion or stigma reflected upon the patient and it will result in the discovery of cases of syphilis needing treatment.

Assuring you of my great interest in your work and my desire to have you cooperate in this most important health problem, I am,

Very truly yours,

HERMAN M. BIGGS;

Commissioner.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

DEATHS FOR THE MONTH OF JUNE, 1920.

Consumption	11	Broncho-Pneumonia	7
Typhoid Fever	1	Bright's Disease	10
Scarlet Fever	0	Apoplexy	12
Whooping Cough	1	Cancer	10
Diphtheria	1	Accidents and Violence.....	7
Influenza	0	Deaths under one year.....	14
Measles	1	Deaths over 70 years.....	29
Diarrheal Diseases	2	Death rate	14.17
Pneumonia	1	Death rate less non-residents	11.74

Deaths in Institutions.

	Non-Res.	Res.		Non-Res.	Res.
Albany Hospital	12	6	Child Hospital	0	1
Hospital for Incurables..	2	1	Central Fed. Labor Pav.	0	1
Homeopathic Hospital ..	3	9	Albany County Hospital	0	1
Home for the Aged....	0	4	Public Places	0	3
St. Peter's Hospital.....	1	7			
Maternity Hospital	0	3		20	36
St. Margaret's Home....	2	0	Births		190
			Still Births		6

DIVISION OF COMMUNICABLE DISEASES.

Typhoid Fever	3	Whooping-cough	27
Scarlet Fever	12	Tuberculosis	16
Diphtheria and Croup.....	17	Mumps	18
Chickenpox	8	Pneumonia	31
Smallpox	0	Influenza	1
Measles	178		
German Measles	0	Total	311
Number of days quarantine for scarlet fever:			
Longest.....	34	Shortest.....	30
		Average.....	31
Number of days quarantine for diphtheria:			
Longest.....	17	Shortest.....	10
		Average.....	10 7/10
Fumigations:			
Rooms.....	65	Buildings.....	124
Milk bottles disinfected.....			419

Communicable Diseases in Relation to Schools.

		Reported	
		D.	S.F. M.
Public School No. 1.....		..	1
Public School No. 3.....		..	1 2
Public School No. 4.....		1	1
Public School No. 5.....		..	1 ..
Public School No. 7.....		..	3
Public School No. 8.....		..	7
Public School No. 9.....		..	7
Public School No. 10.....		..	2
Public School No. 12.....		..	4
Public School No. 15.....		..	3
Public School No. 18.....		..	1 7
Public School No. 21.....		..	6
Public School No. 22.....		..	20
Public School No. 24.....		..	1
St. Patrick's Institute.....		..	6
Cathedral School .....		..	5
Lady of Angels School.....		..	3
Albany Orphan Asylum.....		6	..
St. Vincent's Asylum.....		2	..

MISCELLANEOUS.

Cards posted for communi- cable disease	136	Vaccination dressings	70
Cards removed	112	Children examined for em- ployment certificates	280
Notices served on schools..	242	Number of employment cer- tificates issued	239
Notices served on stores and factories	18	Taking specimens of blood for Wassermanns	2
Postal card returns sent to doctors	136	Taking smears for Gono- cocci	1
Postal card returns received from doctors	112	Miscellaneous investigations by 7th District Physician.	20
Inspections and reinspections	149		
Vaccinations	18		

Tuberculosis.

Living cases on record June 1, 1920.....		806
Cases reported:		
By card	15	
Dead cases by certificate.....	1	16
		<hr/>
		822
Dead cases previously reported.....	10	
Dead cases not previously reported.....	1	

Removed	13	
Died out of town.....	2	
Recovered	0	
Unaccounted for	0	26
		<hr/>
Living cases on record July 1, 1920.....		796
Total tuberculosis death certificates.....		11
Visits to cases of tuberculosis.....		147
Miscellaneous visits		20
Visits to physicians.....		25

LABORATORY REPORT.

Diphtheria.

Initial Positive	33	Release Negative	58
Initial Negative	454	Unsatisfactory	13
Release Positive	26		
			<hr/>
Total			584

Sputum for Tuberculosis.

Positive	42	Unsatisfactory	0
Negative	109		
			<hr/>
Total			151

Widals.

Positive	3	Unsatisfactory	1
Negative	15		
			<hr/>
Total			19

Meningococcus.

Positive	0	Negative	0
			<hr/>
Total			0

Wassermann tests (positive 45)	264	Gonorrhoea Examinations (positive 12)	51
Milk Analyses	251	Miscellaneous Examinations.	37
Water Analyses	0		
Pathological Examinations .	0		
			<hr/>
Total Examinations			1,357

HEALTH PHYSICIANS REPORT.

First District.

Cases assigned	8	Sent to hospitals.....	3
Calls made	30	Remaining under treatment.	0
Vaccinations	0		

Second District.

Cases assigned	7	Sent to hospitals.....	0
Calls made	11	Remaining under treatment.	2
Vaccinations	0		

Third District.

Cases assigned	3	Sent to hospitals.....	2
Calls made	3	Remaining under treatment.	0
Vaccinations	0		

Fourth District.

Cases assigned	5	Sent to hospitals.....	3
Calls made	7	Remaining under treatment.	0
Vaccinations	0		

Fifth District.

Cases assigned	5	Sent to hospitals.....	2
Calls made	10	Remaining under treatment.	0
Vaccinations	0		

Sixth District.

Cases assigned	2	Sent to hospitals.....	1
Calls made	14	Remaining under treatment.	1
Vaccinations	0		

Seventh District.

Cases assigned	5	Sent to hospitals.....	0
Calls made	29	Remaining under treatment.	1
Vaccinations	0		

Totals.

Cases assigned	35	Calls made	104
----------------------	----	------------------	-----

DIVISION OF SANITATION.

Complaints	87	Reinspections	154
Inspections	93	Plumbing	14
Plumbing	15	Sanitary	140
Sanitary	78		

HEARINGS.

Hearings	6	Cases heard	6
----------------	---	-------------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	132	Houses tested	22
Old Houses	69	Smoke	0
New Houses	63	Blue or red	1
Permits issued	70	Peppermint	2
Plumbing	61	Water test	19
Building	9	Houses examined	23
Plans submitted	18	Re-examined	64
Old buildings	6	Valid	12
New buildings	12	Without cause	11
		Violations	0

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	14	Cats removed	70
Dogs removed	35		
		Total	119
		Cases eggs removed.....	44
		Tubs eggs removed.....	11

DIVISION OF MARKETS AND MILK.

Public market inspections....	32	Dairies inspected	32
Market inspections	124	Milk cans inspected.....	196
Fish market inspections....	12	Milk cans condemned.....	0
Fish peddler inspections....	0	Lactometer readings	269
Slaughter house inspections.	3	Temperature readings	269
Rendering establishment in-		Fat tests	24
spections	1	Sediment tests	29
Pork packing house inspec-		Chemical tests	0
tions	4	Cows examined	364
Hide house inspections.....	2	Cows quarantined	0
Milk depots inspected.....	36	Cows removed	2
Stores inspected	44	Complaints investigated	3

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—REPORT FOR JULY, 1920.—1. Number of new cases this month, 265: Classified economically: Free, 143: Bed cases, 56; prenatal, 4; dispensary soc. service, 22; tuberculosis (pos.), 10; tuberculosis (super.), 44; hospital social serv., 1; venereal social, 6. Paid, 122: Limited means, bed cases, 60; Metropolitan bed cases, 45; Metropolitan prenatals, 10; industrial bed cases, 4; industrial social cases, 2; Western Union, 1. Cases carried over from last month, 595: bed cases, 63; prenatal cases, 43; dispensary social serv., 5;

tuberculosis (total), 408; hospital soc. service, 49; venereal, 27; industrial, 0; Western Union, 0. Classification of bed cases: Medical, 87; surgical, 5; obstetrical, 41; prenatal, 25; confinements, 26; maternity, 16; miscarriages, 3; number of babies born, 42.

2. *Visits for Nurses*.—All departments, 1,162; for bed care, 752; prenatal instruction, 39; tuberculosis (sup. and inst.), 33; venereal dis. instr., 50; hospital social serv., 75; general soc. service, 109; for other purposes, 49; dispensary social, 10; supervision, 45.

3. *Source of Nursing Cases*.—Metropolitan agents, 34; doctors, 82; nurses, 0; dispensary, 3; family or friends, 48; other sources, 8.

4. *Disposition of Bed Cases*.—Discharged recovered, 39; discharged improved, 64; discharged unimproved, 27; discharged dead, 3; discharged to other care, 30; carried, 103. Disposition of other cases: Prenatal: Discharged to maternity care, 25; to hospital, 1; to other care, 1; carried, 30. Dispensary social service: Discharged to dispensary care, 22; carried, 2. Hospital social service: Discharged home, 3; dead, 0; to dispensary, 2; to Pavilion "F," 0; lost, 0; carried, 45. Venereal: Discharged cured, 0; temporarily, 1; to other care, 0; carried by dispensary, 5; under supervision, 17; under care at the House of Good Shepherd, 0. Tuberculosis: Discharged dead, 6; left town, 0; not T.B., 0; carried (positive), 307; (supervision), 149. Industrial: Discharged (soc. or bed cases), 0; carried, 0. Total number of cases carried over into August, 555.

5. *South End Dispensary Report*.—Number of clinics, 89; surgical, 10; medical, 7; gynecological, 4; prenatal, 2; eye and ear, 16; venereal, 6; nerve, 4; nose and throat, 8; skin, 4; children, 7; lung, 0; children's lungs (observ. clinic), 2; clinics with doctor attending, 81; without, 8. Number of new patients treated, 141; old patients, 433; total number of patients, 574; number calls at S. E. Disp. for ear irrig., 157.

6. *Industrial Dispensary—at Huyck's Mills*.—Number of clinics held, 14; new cases treated, 18; old, 92; total number treated, 110; number of physical examinations, 9.

No industrial cases are really discharged, but we do not add them on to our cases carried nor do we add on the South End Dispensary cases as carried on our general report. They are kept separate.

Signed, FLORENCE NOLL, R. N., *Assist. Superintendent*.

MEDICAL SUPPLIES IN SIBERIA.—Quantities of medical supplies have been sent by steamer to Siberia and stored in the great warehouse which covers more than a half-acre of ground in Vladivostok. The house is in charge of R. R. Moxley, formerly in France.

The steamer Hefforn arrived last month in Vladivostok, with eight hundred cases of surgical dressings mostly made in Red Cross chapters of America and valued at \$65,000. The transport Sherman shortly after arrived with five hundred and eighty-six cases of drugs and chemicals

valued at \$75,000, one hundred and eight cases of equipment valued at \$38,000 and thirty-three cases of surgical instruments valued at \$52,000.

The Red Cross warehouse now contains enough surgical instruments and medicines to equip fifty hospitals; enough dental supplies to set up ten chairs; enough medicine and glassware to keep clinics for 2,500 people a day for six months; four complete X-ray machines; enough serum for preventable diseases to give immunity to 100,000 people, and scales and medicines for one hundred dispensaries.

There are five hundred cases of medicines such as quinine, ipecac, aromatic ammonia; 10,000 thermometers, \$110,000 worth of narcotics, 3,000 pairs of crutches; 16 autoclaves for sterilizing; 5,000 pounds of ether—the last item being the balance of a shipment of 30,000 pounds to the western hospitals. There are 175,000 glass bottles which will be enough to last for three months in Red Cross hospitals and those of the Russians and the Czechs. There are 3,000 pounds of collodion packed in hundred-pound drums; 25,000 hot water bags, 75,000 already having been shipped in thousands of cases containing sterilizers, stoves, surgical dressings, blankets, bathrobes, and other things necessary to the sick.

In two months, Mr. Moxley has shipped forty-five carloads of surgical and medical supplies to Omsk and the other hospitals on the front operated not only by American Red Cross units but by the Russians and Czechs as well. He is prepared to load, on forty-eight hours' notice, twenty cars of supplies to be coupled to any sanitary train going into the interior.

TYPHUS EXTERMINATED IN SERBIA.—The five-year campaign which American Red Cross doctors and nurses have been waging against typhus in Serbia has ended victoriously. The recent report of the Serbian Commission states that there are but sixty-five cases in the country, two-thirds of these being in Belgrade where the Red Cross operates a hospital for typhus cases only.

The first unit organized to fight typhus in Serbia was headed by Dr. Richard L. Strong, and arrived just five years ago. The invasion of the Austrians forced the unit to flee from the country. The subsequent famine and exposure endured by the Serbs served to increase the spread of typhus during the next two years.

During 1915, 150,000 persons died of the disease in a population of 3,000,000. One hundred and fifty doctors succumbed, so that after the Serbian army defeated the Austrians and work was taken up by the Red Cross there was only one doctor to every 75,000 persons. In towns of 4,000 population there was usually not one physician, although the number of typhus cases ranged from ten to thirty. There was one surgeon and one dentist in the whole country.

The free dispensary was the foundation of the campaign against typhus in Serbia. Dispensaries were established at the most advantageous points. Medical units working from these main points penetrated far into the interior of the country. Soup kitchens were established to fight mal-

nutrition; farmers were assisted to return to their homes; housing conditions in cities were improved; hospitals were operated by the Red Cross and worthy institutions under other direction were furnished with needed supplies and equipment.

"It may seem strange," writes Lieut.-Col. Edward Erskine Hume of Frankfort, Kentucky, present director of the American Red Cross Commission in Serbia, "but our doctors and nurses conquered the plague by using laundry soap, scrubbing brushes, kerosene, disinfectants, and delousing machines. We went into the homes of the people and carried the patient out. At times they were reluctant to leave, and we had a hard task overcoming their fatalism. We had to use force, for left to themselves they would have allowed the disease to run its course, which meant death not only to themselves, but to others."

Since typhus has been practically exterminated, the commission has turned its efforts toward instilling the principles of hygiene, sanitation and nutrition in the minds of the people. Appreciating the victory of the Red Cross, prominent citizens are organizing to assist in keeping the country free from the plague, which there appears in its most malignant form.

PERSONALS.—Dr. LEON C. COTE (A. M. C., '17), has removed to Newburgh, N. Y., where he will practice his specialty of rhinology and laryngology.

—Dr. HARRY K. TEBBUTT, JR. (A. M. C., '16), having retired from the army service and having finished his service as interne in the Albany Hospital, has accepted a position as assistant to Dr. E. E. Hinman in practice of diseases of the nose and throat.

—Dr. MARCUS A. CURRY (A. M. C., '04), has been promoted to the superintendency of the State Hospital for the Insane at Morris Plains, N. J., succeeding the late Dr. B. B. Evans of "brain-storm" fame.

MARRIED.—Dr. AUGUSTUS J. HAMBROOK (A. M. C., '07), and Miss Anna O'Brien were married at St. Peter's Church, Troy, N. Y., on June 30, 1920.

—Dr. JOSEPH A. COX (A. M. C., '01), and Dr. ARVILLA LANG were married on July 24, 1920, and will reside at 338 State St., Albany, N. Y. Dr. Cox is in active practice, and is assistant surgeon at St. Peter's Hospital, and has a record of active military service, both in the National Guard of the State and during the war. Dr. Lang has been assistant director in pathology at the Bender Laboratory.

Current Medical Literature

NEW YORK STATE MEDICAL LIBRARY.

Edited by Frances K. Ray

RECENT ACCESSIONS.

- American association of genito-urinary surgeons. Transactions, v. 12, 1919.
- Association of American physicians. Transactions, v. 34, 1919.
- Baketel, H. S. Treatment of syphilis. 1920.
- Central Indiana hospital for the insane. Report from the Department of pathology and the Department of clinical psychiatry, v. 7, 1915-17.
- Da Costa, J. C. Modern surgery, general and operative. 1919.
- Duclaux, Emile. Pasteur—the history of a mind; tr. by E. F. Smith and F. Hedges. 1920.
- Evans, Elida. Problem of the nervous child. 1920.
- Head, Joseph. Everyday mouth hygiene. 1920.
- Hill, H. W. Sanitation for public health nurses. 1919.
- Hühner, Max. Practical treatise on disorders of the sexual function in the male and female. 1916.
- International clinics, ser. 30, v. 2, 1920.
- Kraepelin, Emil. Dementia praecox; tr. by Barclay. 1919.
- Lister institute of preventive medicine, London. Collected papers, no. 11-14, 1914-18.
- Paton, Stewart. Education in war and peace. 1920.
- Repplier, Agnes. J. William White, a biography. 1919.
- Ross, J. S. Handbook of anesthetics. 1919.
- Sluder, Greenfield. Concerning some headaches and eye disorders of nasal origin. 1919.
- Starling, E. H. Principles of human physiology. 1920.
- Stoddart, W. H. B. Mind and its disorders. 1919.
- U. S. Census bureau. Special tables of mortality from influenza and pneumonia in Indiana, Kansas, and Philadelphia, Pa. Sept. 1 to Dec. 31, 1918.
- U. S. Census bureau. Standard nomenclature of diseases and pathological conditions, injuries, and poisonings for the U. S. 1920.
- Weed, L. H. and others. Study of experimental meningitis. 1920. (Rockefeller institute for medical research. Monograph No. 12.)

NEW JOURNALS.

- American journal of physiological optics.
- British dental journal.

ALBANY MEDICAL ANNALS

Original Communications

INTESTINAL TUBERCULOSIS.

Read before the Medical Society of the County of Albany, April 13, 1920.

By ROBERT C. PATERSON, M. D.,

Saranac Lake, N. Y.

Until recently, when mention was made of tuberculosis of the intestines, we all thought of a terminal complication of pulmonary tuberculosis, for which little was to be done and to which a fatal termination could almost invariably be expected. The reason for this widespread belief is found in the fact that the diagnosis of this complication was only made when the condition was far advanced and the symptoms well established, and also because we only looked for this complication in cases of far advanced pulmonary tuberculosis. More recently our ideas of tuberculosis of the intestines have undergone a change and it has now taken an important place among the complications of pulmonary tuberculosis, which may arise at any stage of the lung disease. We are also learning to recognize it in its early stages before it becomes generalized through the intestines, and at a time when there is something to be hoped for and expected from treatment. In many cases of pulmonary tuberculosis with slight digestive disturbances we now know that ulceration of the intestinal tract is at the bottom of these symptoms, and that if it is possible to relieve the abdominal condition the pulmonary trouble will heal much more rapidly and surely. Any disturbances of the gastro-intestinal tract which interfere with the

proper assimilation of nourishment are of the very greatest importance in the treatment and prognosis of pulmonary tuberculosis, as recovery is largely dependent on a proper and adequate supply of food, which is fully digested and utilized to counteract the drain on the system caused by the disease. It is difficult as yet to tell with any degree of accuracy in what proportion of cases these intestinal complications occur. Autopsies show that in about seventy-five per cent of cases dying with pulmonary tuberculosis ulcers of the intestines, of greater or less extent, are found. Some pathologists would put this figure even higher. It is certain, however, that clinically we do not find symptoms of intestinal involvement in anything like such a large percentage of our pulmonary cases. Even in the advanced stages, granting these figures to be correct, we must assume that a great deal of this intestinal ulceration is latent from a clinical standpoint and produces no recognizable symptoms. This bears out what is now being found by the routine X-ray examination of the intestinal tract of persons suffering from pulmonary tuberculosis. In a good many cases it is found that X-rays of a Barium meal give what we now consider to be a typical picture of intestinal tuberculosis, while the patient is not suffering from clinical intestinal tuberculosis, and has not the symptoms usually associated with this complication. The study of intestinal tuberculosis is thus not so simple as we have been taught to think, and further investigation is necessary to recognize the borderline cases in which the classical symptoms are not present.

The lesions which are found in intestinal tuberculosis are chiefly ulceration and a certain amount of fibrosis or inflammatory thickening around the ulcers. The ulcers arise from breaking down of the lymphoid follicles, and in the small intestine areas are apt to be larger in size than in the large intestine. In the large intestine, especially in the recent conditions, the ulcers are usually small, about one centimeter or less in diameter, and are scattered fairly thickly throughout the mucosa. The edges are raised or heaped up giving the ulcers a crater-like appearance. There is frequently a certain amount of plastic exudate on the peritoneal surfaces overlying the base of the ulcer, and frequently subperitoneal tubercles are seen. The glands in the

•

mesentery are usually somewhat enlarged. The favorite seat of ulceration is the lower end of the ileum and the caecum. Next in frequency are the flexures of the large intestine, hepatic, splenic or sigmoid. In many cases, unfortunately, the ulcers are widespread, extending from the lower end of the duodenum right through to the rectum. There are many points in connection with the etiology of intestinal tuberculosis which are not yet solved. It has been the custom to ascribe the origin of these ulcers to bacillus-laden sputum which is swallowed voluntarily or involuntarily, as must occur in every case of open pulmonary tuberculosis. The finding of tubercle bacilli in ninety per cent of the stools of patients with open tuberculosis of the lungs gives some support to the theory that the infection takes place directly from the passage of the bacilli in the sputum through the intestinal mucosa. This theory does not explain many of the phenomena which we find and there is a certain amount of evidence that the infection arises in many cases by the blood stream, the bacilli gaining entrance to the circulation from the lungs and being carried to the intestines by the mesenteric arteries. This must certainly be so in the cases with widespread ulceration where the ulcers are all apparently of about the same age, but it is difficult to understand why a localized caecal tuberculosis should arise in this way. We are also ignorant of the factors which would tend to cause the bacilli to enter the mesenteric arteries and not other arteries of the systemic circulation. This same question arises in cases of renal, joint or meningeal tuberculosis, although it is generally accepted that these complications are haematogenous in origin.

In many cases, suspicions of intestinal complications may be aroused by the observation that a patient is not so well in a general way as he was previously, although the signs and symptoms referable to the lungs are stationary or improving. This apparent improvement of the lungs associated with the development of the disease in the intestines has been frequently noted, as it has been during the development of complications elsewhere in the body, there being an apparent compensatory reaction. In some cases a decrease in the amount of expectoration and diminution in the extent and coarseness of the râles may be

accounted for by a draining of the system by the diarrhoea, but in others this is not sufficient to explain the fact. At the onset there is usually an increase in the general symptoms, fever, general malaise, loss of weight, and so forth, but it is always difficult to determine whether these symptoms are caused by the pulmonary trouble or by a beginning intestinal infection. Increased activity in the lungs would cause fever and this in turn lead to gastric and intestinal disturbances, or these latter may themselves account for the fever. In some cases starvation of the patient for forty-eight hours will cause a disappearance of the symptoms, particularly the fever. The writer sometimes uses this test to determine whether the symptoms have their origin in the lungs or in the gastro-intestinal tract.

Of the purely digestive symptoms anorexia is usually one of the first to be noted, although in rare instances the patients have enormous appetites and seem unable to satisfy their craving for food. The loss of appetite may be simply a lessened desire for food or may be caused by nausea which the presence of food produces. In other cases eating causes pain or the ingestion of food may stimulate the bowels so that a movement is imperative before the meal is finished or shortly after, and for these reasons the patients are afraid to eat. Almost all patients have considerable flatulence and complain in greater or lesser degree of this. This varies from a full feeling in the abdomen to active rumbling in the intestines which may or may not be accompanied by pain, "gas pains" as they are termed. Sometimes the gas is expelled from the stomach as eructations, at others it is passed by the rectum, or in other cases in both directions.

Pain varies greatly in intensity. Some patients never have any subjective pain, although tenderness can usually be found by careful palpation, while others have sharp colicky attacks which closely simulate acute appendicitis. All grades of intensity may be found between these two extremes. The pain is usually localized in the lower part of the abdomen, but is sometimes referred to the epigastrium. It usually occurs from one to three hours after eating, about the time that food reaches the ileocaecal valve. When this occurs it gives a good idea of the site of the trouble. Nausea and vomiting are of less frequent occurrence

accompanying the pain, than we find in ordinary appendicitis, but one or the other of these occurs in the majority of the patients. In a few cases vomiting is the chief symptom, and in one case an absolute inability to keep even liquids on the stomach was the the only symptom found and was only explained by autopsy, which revealed extensive ulceration through practically the whole length of the small and large intestine, accompanied by enlargement of the mesenteric glands.

We have been accustomed to associate diarrhoea with intestinal tuberculosis and this has been considered to be the one constant symptom of this trouble, without which a diagnosis could not be made. This view is fallacious and if we wait for diarrhoea to develop we are in the position of the physician who will not make a diagnosis of pulmonary tuberculosis until he can find a cavity in the lungs. Diarrhoea is a frequent symptom but is often found only in the advanced stages and it is not infrequent to find constipation of an obstinate variety as a troublesome symptom. The looseness of the bowels is probably caused by the contents of the intestines setting up an irritation of the ulcerated areas which in turn causes increased peristalsis. The constipation, on the other hand, is probably the result of spasm of the intestines caused by this same irritation or in some cases there may be a partial obstruction from hypertrophic tissue or adhesions. All degrees of looseness of the bowels may occur from one soft non-formed stool a day to many watery movements which drain the patient's system and speedily wear him out. As mentioned above ingestion of food in some cases excites peristalsis so that a movement is imperative before a meal is finished. Sometimes diarrhoea is only relative and, on being questioned, a patient will admit that while he was previously constipated, only obtaining movements with the aid of laxatives, he now has a daily stool without artificial assistance. A curious fact has been brought out by the X-ray examination of the intestines and this is that some patients who have complained of constipation may completely empty the intestines of the barium in twenty-four hours, showing an actual hypermotility instead of delayed activity. In a few cases the beginning of the diarrhoea may be definitely dated from an acute intestinal dis-

order, as in the case of a returned soldier whose trouble began after eating some tinned food in France, after which there was an epidemic of diarrhoea in the battery to which he was attached.

It must be recognized that all these symptoms may come in waves for a time, periods of quiescence and periods of activity alternating, although when the disease is once well established the symptoms usually become progressively worse. Examination of the abdomen usually reveals some tenderness on palpation. This is frequently localized and is constantly present for a long period of time so that it may be found on repeated examinations. The right lower quadrant, corresponding to the most frequent pathological location of the ulcers in the lower ileum and caecum, will usually be found to be the site of tenderness. Often pressure will cause the pain to radiate across to the opposite side of the abdomen or to the epigastrium, and at times pressure over the tender area will produce a feeling of nausea. In some cases it is possible to palpate a mass in the diseased area which represents either thickening of the bowel wall, usually the caecum or ascending colon, or else a massing together of coils of intestine by adhesions. Those cases which tend to assume a more chronic course will show the greatest evidences of thickening, as hyperplasia must be looked on as a reaction on the part of the intestine against the infection, and these cases are the most favorable for operation. The acute cases, in which the ulceration is widespread, rarely give any palpable evidences of thickening. When pain is a prominent symptom there will be a sensation of resistance over the diseased bowel which at times amounts to an actual rigidity of the abdominal muscles.

Formerly much importance was placed on an examination of the stools in the diagnosis of intestinal tuberculosis, but we now recognize that this is of little importance. Mucus, pus, and blood cells, and tubercle bacilli may all be found but are not diagnostic as it is the rule for patients with pulmonary tuberculosis to swallow some of their sputum involuntarily, as during sleep, and this swallowed sputum will cause the appearance of mucus, pus and bacilli in the faeces, while the ingestion of meats will make the faeces give the chemical reaction for blood. The recognition of this will make it clear why we cannot place

much reliance on the examination of the stools in diagnosis. The gross appearance of the stools varies greatly from a hard, constipated, formed mass to a thin, watery evacuation. The latter type of stool is usually found only in the advanced cases, although occasionally in the cases with more localized disease. Frequently the defecation is more properly termed soft or mushy and this may be looked on as the most typical form in the earlier cases. Blood is not often seen in macroscopic quantities, although haemorrhage from the intestines occasionally occurs. Mucus may be seen in quite large masses. The odor is usually foul and when once noticed is quite characteristic, so much so that the patients themselves often speak of it. An examination of the blood often shows some degree of anaemia and there is frequently a noticeable leucocytosis, the increase affecting all forms of cells. This may be caused by a diminution in the fluid content of the blood from the diarrhoea or may be due to absorption through the ulcerated areas of septic or putrefactive materials.

Probably the greatest help in the diagnosis of early intestinal tuberculosis is an X-ray examination of a barium meal, the details of which are exhaustively given in a recently published paper by L. Brown and Sampson.¹ The examination must always be controlled by a knowledge of the findings in the normal case. In these the barium will reach the ileocaecal valve in from one to three hours after ingestion. The caecum should be seen in from two to five hours and in from six to eight hours the head of the column should have reached the hepatic or splenic flexure. The caecum should remain filled, partially at least, for twenty-four to thirty-six hours. Complete evacuation of the barium from the bowel takes from thirty-six to forty-eight hours. When the caecum and large bowel, at least the first half, are filled with barium, the outline of the shadow is even and regular except at the indentations of the haustral sacculations. Where ulceration is present one of the most striking facts noted is a hypermotility of the intestines, or increased rapidity of the progress of the barium. Apparently when this reaches the ulcerated surfaces, peristalsis is set up by the irritation and the contents rushed along more rapidly than normally, so that in six

to eight hours the head of the column is much lower down than in the normal case. Frequently the rectum is found filled with barium in six hours, and in twenty-four hours the barium has been completely expelled from the intestines or at most a small residue remains in the rectum. In other cases a different picture is seen and instead of the head of the column being too far advanced in six to eight hours the barium is held up at the ileocaecal valve so that none has entered the caecum at this time. The explanation of this is probably a spastic closure of the valve caused by the irritation of the mass on the ulcers or partial obstruction from thickening of the intestinal walls, or from adhesions. Following up these cases, however, reveals the fact that once this spasm is overcome and the barium enters the caecum, it is then hurried on; and in twenty-four hours we have the picture described above, namely, an empty intestine. This picture is known as "ileal stasis." The other divergence from the normal is that of defective filling of the diseased part. Instead of the evenly filled caecum and colon with sharp, clear-cut outline and normal haustral markings, the ulcerated area presents an irregular outline with somewhat fuzzy edges and narrowing of the diameter of the shadow.

These three pictures hypermotility, ileal stasis, and filling defects make up what we consider a triad of appearances which are indicative of ulceration of the caecum and ascending colon. There is usually a combination of these, but any one alone is suggestive. Up to the present it has been impossible to find any picture diagnostic of disease in the small intestine. In some cases barium enemata have been given and the progress watched under the fluoroscope and then plated. These have seemed to be less satisfactory than the ingested meal, but in some cases have given valuable information, particularly as to the location and extent of the lesion. Normally the enema passes backward through the sigmoid, descending, transverse, and ascending colon, filling these and the caecum evenly and being arrested at the ileocaecal valve. When diseased, the colon does not fill so evenly, sometimes pain is marked when endeavoring to fill the colon and frequently the ileocaecal valve permits the barium to enter the small intestine.

As to the value of the X-ray examination in the diagnosis of these conditions, no one who has had experience with it can doubt; and it is at least of as much help as is the X-ray examination of pulmonary cases. It is necessary, however, that the plates be interpreted by a person who has had experience if information of value is to be obtained; and the necessity of correct interpretation cannot be too strongly insisted on. In those cases of my own which have been X-rayed and later operated on, only once has the X-ray failed to distinguish between tuberculous ulceration or other conditions and in that case the condition was one of localized ulceration around the orifice of the appendix in which three different tests failed to show what we consider a typical picture of tuberculosis.

The course of this disease is usually progressive unless something is done to arrest its development. This makes the prognosis distinctly serious, but even here we are learning that there are grounds for hope in some few cases. A few years ago, and even now, the statement that some of these cases become arrested or heal spontaneously would have been hotly denied by many physicians, but I have no hesitation from my own experience in saying that this is not only possible but does occur in a limited number of patients. If the X-rays give a correct interpretation of this condition, and as far as we have gone this is a justifiable conclusion, then we must admit that some patients who have had intestinal symptoms and who have given positive X-ray pictures, have lost the symptoms temporarily at least, and later X-rays have failed to show evidences of any disease. Even stronger evidence than this is the fact that in five patients in whom operation revealed tuberculosis which for one reason or another could not be removed, the disease is now apparently arrested. The length of time since operation in these cases is from five and one-half to one year. Three of them, operated on respectively five and one-half years, two years, and one year and nine months ago are back at work, while the other two are still undergoing treatment but improving, two years and four months and one year after operation.

Having made the diagnosis of tuberculosis of the intestines can anything be done to help nature to arrest the condition?

One difficulty in the way of healing of these intestinal ulcers had been the nearly constant movement of the intestines, and our inability to give them physiological and mechanical rest such as is essential for healing. The benefit of the rest treatment during active disease is well known in pulmonary, laryngeal and joint cases, and if we could get a similar rest for the intestines, we could expect more frequent healing. Medical treatment can do much to give relief of symptoms and by giving relief put the bowels in the best possible condition for healing. Theoretically it would be expected that regulation of the diet should have a beneficial effect and a non-irritating diet without much indigestible residue, which is not liable to fermentation and which is constipating rather than laxative, would be indicated. Unfortunately in practice it is not found that diet has much effect on the symptoms; and we are confronted by the problem whether to cut down the diet in the hope of giving relief to symptoms and thus running the risk of weakening the patient or allowing a fuller diet to keep up strength and disregard its effect on symptoms. Each case must be considered by itself and various diets tried out, eliminating the ingestion of such substances as are found to aggravate the symptoms for that particular patient. It must be remembered that it is better to have a small quantity of food digested and assimilated than to force the patient to eat and have much of the food passed in an undigested state. In other words, it is the amount of food assimilated that counts and not the amount ingested.

Medicinal treatment has been tried faithfully and while the symptoms may be relieved there is no drug which we know that has a curative effect. Relief of symptoms, however, not only makes the patient more comfortable but does eliminate irritation to a certain extent and thus favors healing. Intestinal antiseptics have never given much benefit. Salol, creosote, iodoform, beta-naphthol and others have been tried. Iodine has apparently given relief in some cases. This lessens the flatulence, and consequent gas pains, and in this way seems to quiet peristalsis. While I do not think that the iodine directly aids in healing, I have had noticeably good results symptomatically. Of the drugs which are given to check the diarrhoea, bismuth and its salts,

iron, lead, tannic acid and its organic derivatives, gallic acid, aromatic sulphuric acid and others have all been tried. Usually opium has to be resorted to, both for the pain and for the diarrhoea. For this opium itself as the powder, tincture or as paregoric has a better effect than the alkaloids, morphine, codeine, and so forth. Calcium salts, particularly the chloride, were formerly much used to check diarrhoea, but owing to their nauseating properties fell into disuse. Recently calcium chloride used intravenously has been advocated, 2 to 5 cubic centimeters of a 10 per cent solution, sterilized, being injected into one of the arm veins every few days. Personally I have not been able to obtain more than very transient results from this. Calcium carbonate in large doses has in a few cases given better results and is much less irritating. Recently I have been using mineral oil in these cases in the hope that the food would be passed along with less irritation to the ulcerated surfaces and at times, while the movements have at first increased in frequency, their number has later diminished and there has been less flatulence and pain. Lavage of the colon has been advocated; but its results are disappointing and the lavage is frequently accompanied by considerable pain, and faintness. Heliotherapy has been recommended, either by exposure to the direct rays of the sun or to the artificial light of the quartz lamp. My experience with this has been limited and the results not encouraging, but the method is worthy of trial if it can be thoroughly carried out, which is difficult without special arrangements.

Within the last few years our thoughts have turned to the possibility of treatment of some of these cases by surgery. Archibald² in 1917 reported twenty-seven cases which came to operation and his numbers have since been greatly augmented. I have given a brief résumé at the end of this paper of the cases from my own patients who have been operated on for tuberculosis of the intestines. The surgical procedures which are possible are several. Excision of all the diseased portion is the ideal and has been possible in some instances. If the disease is well localized and limited in extent and the patient is sufficiently strong to stand this procedure, much may be expected from this. If the disease is too extensive to justify such an excision or if

adhesions make this impracticable, an anastomosis of healthy bowel above the site of disease into healthy bowel below with exclusion of the diseased area and the establishment of a fistula to permit of drainage from the ulcerated bowel, will sometimes give such a degree of rest to the diseased portion that arrest of the process takes place. In other cases operation shows such a condition that the disease cannot be dealt with and nothing can be done. In some of those cases, in which pain has been a prominent symptom, removal of the appendix without further surgical intervention has given marked relief. In a few cases an ileostomy, above the disease, with the establishment of an artificial anus, has been done, but this is an extreme measure and the future life of the patient must be fully considered before such a procedure is justified. Ideally this might be looked on as a temporary measure with the hope that later on an anastomosis might be done, but up to the present I know of no case in which this secondary operation has been attempted. I am not competent to discuss the surgical technique of these various operations and it is my aim merely to outline the possibilities of surgery in this disease giving the results of operations in cases in which some attempt has been made by others to benefit my patients. While surgery offers hopes, probably greater than any other yet tried mode of treatment, and it is attractive to medical men and to the patients themselves when once explained and suggested to them, it is necessary to curb our enthusiasm and to consider the possibilities from all sides, medical and surgical. First we must be convinced that the operation offers hopes of relief of symptoms or of arrest or removal of the disease, and that the dangers of the operation are less than the danger of the disease for which it is recommended. In patients with pulmonary tuberculosis operative procedures are more dangerous than in others who have healthy lungs. It is true that many, in fact most of these patients, stand the operation and the anaesthetic well; but in some cases, no matter how carefully and skillfully surgeon and anaesthetist do their parts, the lung trouble is made distinctly worse, sometimes acutely so, and this activation of the lungs initiates a progressively downward course. The condition of the lungs is all important in the decision for or

against operation and no matter how localized the intestinal disease, if the lungs show evidences of progressive trouble, the operation will be a danger or at least will have no effect in the ultimate results. The prognosis may be said to depend more on the lungs than on the intestines. If the lungs seem to be stationary or inactive and the patient's symptoms to be chiefly caused by the intestinal disease, then operation is justifiable as a continued derangement of the digestion and consequent impossibility of obtaining proper nutrition will, in all likelihood, later on favor a spread of the trouble in the lungs. Another point to be recognized is that no matter how recent the intestinal symptoms, and how localized the intestinal disease seems to be, by our present methods of examination it is impossible to definitely predict the extent of the intestinal ulceration. This has been demonstrated time and again at operation and many disappointments have been met with when the extent of ulceration is seen in supposedly localized cases. These operations must for this reason be considered as more or less exploratory and this should always be explained beforehand to patient or friends. Until our knowledge is more complete and our experience, particularly in the selection of suitable cases, is longer and greater we must look on operation as a two-edged sword, capable of great benefits on the one hand, but on the other of doing harm. Whether the sword cuts in one way or in the other depends largely on the physician who recommends its use and on the surgeon who wields it.

SUMMARY

1. Intestinal tuberculosis may and does occur as a complication in all stages of pulmonary tuberculosis. incipient as well as advanced.
2. The commonly described symptoms are those of advanced disease and the symptoms of early intestinal ulceration are usually slight and indefinite.
3. Early diagnosis is possible in many cases and has been particularly aided by the use of X-ray examinations.
4. Spontaneous recovery has been known to occur in a few cases.
5. Surgery offers the greatest hope in treatment, but the cases for operation must be carefully selected.

6. The condition of the lungs is as important as the condition of the intestines in deciding for or against operation and in prognosis.
7. We have as yet no means of accurately estimating the extent of intestinal disease, and for this reason operation must always be more or less exploratory.

REFERENCES.

- (1) L. BROWN and H. L. SAMPSON: The Early Roentgen Diagnosis of Ulcerative Tuberculous Colitis, *American Review of Tuberculosis*, III, No. 11, January, 1920, p. 698.
- (2) ARCHIBALD: *Transactions of the National Association for the Study and Prevention of Tuberculosis*, 1917, XIII, p. 117.

CASE REPORTS.

No. 349. Miss S. S., twenty-seven years. Operated on in 1911, for tuberculosis of caecum and lower ileum. Resection of diseased bowel. In 1916 symptoms of pulmonary tuberculosis and lesion found at right apex. This became arrested after a few months' treatment. In 1917 some abdominal symptoms suggestive of recurrence of the former trouble. There have been several attacks of pain which were apparently due to a partial obstruction. In January 1918 the abdomen was again opened. No signs of recent tuberculosis found but many dense adhesions around the site of the former operation. After thorough examination the abdomen was closed. Patient has been in good health since.

No. 129. J. A. M., male, twenty-five years. In 1910 pleurisy with effusion and pulmonary tuberculosis at both apices. Treated for this for 18 months when he went to Western Canada for a little more than a year returning East in July, 1913, with all symptoms and signs increased. In June, 1912, digestive symptoms were noticed, distress after eating, flatulence, no nausea or vomiting, rise in temperature to 103° associated with abdominal attacks. Bowels have been loose, movements being soft, but not watery and odor very foul. Examination in July, 1913, revealed tenderness in right lower quadrant and thickening around the caecum. Operation, August 15, 1913. Tuberculosis of caecum and ascending colon which were excised and an anastomosis made between ileum and transverse colon. The abdominal symptoms were improved temporarily but later returned. Death occurred May 22, 1914. A few days before death a faecal fistula developed in the right lumbar region.

No. 316. A. P., male, thirty years. In spring of 1914 developed symptoms of pulmonary tuberculosis with signs at the right apex from which a good recovery was made. In December, 1914, had some fever and symptoms of indefinite character referable to the digestive tract, with some tenderness in lower abdomen and a palpable mass in ileocaecal region. Constipation was an obstinate symptom. Operation February

10, 1915, revealed free fluid in the peritoneum. Ileocaecal and mesenteric glands enlarged. Peyer's patches enlarged, with subperitoneal tubercles and plastic lymph on peritoneum underlying, thickening of whole of large intestine down to sigmoid. Appendix thickened with a constriction near the base. The appendix was removed and an anastomosis made between the ileum about five inches above the ileocaecal valve and the sigmoid. Convalescence was stormy, the abdominal wound broke down and healed slowly by granulation, the lung disease became active and spread, an ischiorectal abscess developed and there was severe diarrhoea. In August, 1915, an acute intestinal obstruction developed, due probably to regurgitation of faeces into descending colon where inspissation took place. This was eventually relieved by an enema of milk and molasses. After this recovery was steady but slow. Patient resumed his work in autumn of 1917, since which time he has had no symptoms either pulmonary or intestinal.

No. 471. Miss S. N., forty-one years. Pulmonary tuberculosis diagnosed in spring of 1916. Moderately advanced. During summer of 1917, digestive symptoms chiefly pain and diarrhoea developed. Operation was advised and performed in December, 1917. Extensive tuberculosis of the ileum and large bowel and appendix was found so that nothing more than an appendectomy was done. This resulted in a relief from pain, the other symptoms remaining as before operation. In March, 1919, there was a small haemorrhage from the bowels. Since the autumn of 1919, there has been a marked improvement in all symptoms. The diarrhoea has stopped, appetite improved, flatulence lessened, weight increased fifteen pounds, and the temperature rarely rises above 99° , whereas previously it was from 100° to 102° daily.

No. 516. G. F. C., male, thirty-three years. Pulmonary tuberculosis discovered in July, 1917, confined to the right upper lobe. Patient did not seem to improve and in the autumn digestive disturbances were noted. These consisted in pain, dull in character about one and one half hours after eating, anorexia, flatulence marked constipation, no nausea or vomiting. There was tenderness in the caecal region and a moveable mass was felt. Roentgenograms of a barium meal gave positive evidences of caecal tuberculosis and operation was advised, as it was felt that the evidences pointed to localized trouble. Operation, January 3, 1918, revealed extensive ulceration in small and large bowel and appendix. The appendix was removed. The course of the disease was steadily progressive after the operation, both in the lungs and intestines. In March, 1918, a right sided pleurisy with effusion developed, and in May the patient returned to his home and no further information has been obtained.

No. 657. E. S., male, thirty-six years. In July, 1917, symptoms of pulmonary tuberculosis developed but increased and were accompanied by looseness of the bowels early in 1918. At this time there was far

advanced disease in the left lung and some signs at the right apex. Anorexia, flatulence and diarrhoea were present. There was marked localized tenderness over the caecum and ascending colon. X-ray examination of the intestinal tract showed tuberculosis of the large bowel and operation was decided on owing to the miserable condition of the patient. This was performed in May, 1918, and revealed extensive tuberculosis of the large intestine and to a less extent of the small intestine. Nothing was attempted. The patient rallied from the operation but a few days later sank rapidly and died.

No. 679. W. A. S., male, twenty-six years, 1918. Disease in the chest was suspected three years previously, but not until examined for the draft was a definite diagnosis made. In April, 1918, after being under observation for a month it was found that the general condition was not improved, temperature between 99° and 100° was constant, digestive symptoms were marked but the signs and symptoms referable to the lungs were lessening. Examination of the abdomen showed definite movable thickening of the caecum, and X-ray examination was positive for tuberculosis of the caecum and ascending colon. Operation showed a tuberculous condition of the ascending colon; and this was removed together with three or four inches of the ileum and the small piece of the transverse colon. The after course of this case has been interesting. The patient had several pulmonary haemorrhages in October and November, and in December artificial pneumothorax was induced on the right side. This has been carried out ever since and the subsequent course of the case has been satisfactory, and patient is now free from abdominal symptoms and doing light work in New Mexico.

No. 681. W. S., male, forty-four years, 1918. Moderately advanced pulmonary tuberculosis involving the upper part of both lungs. In the spring of 1918, had pain in the abdomen with rise in temperature, and symptoms of acute appendicitis. Diagnosis at this time was appendicitis or caecal tuberculosis. Patient went to his home for operation and the appendix was removed, but caecum found badly inflamed and thickened, adherent to surrounding structures and abdominal wall, and covered with minute tubercles. This was not touched. The wound broke down and healed slowly by granulations, but the patient improved slowly. In May, 1919, X-ray examination showed changes in the region of the caecum and ascending colon. In spite of these positive findings there are no digestive symptoms and patient has returned to his work.

No. 802. Miss M. N., twenty-four years, 1918. Pulmonary tuberculosis of both apices, history of looseness of the bowels, movements occurring immediately after eating, gas and crampy pain with occasional nausea lasting for several months. Abdominal examination showed thickening in the region of the caecum and slight tenderness. X-rays were positive for caecal tuberculosis. Operation in September showed the appendix to be studded with tubercles, ulceration and thickening of the caecum and

lower end of the ileum. The lower six inches of the ileum and half of the ascending colon were removed. Convalescence was uneventful and patient has been back at her work for the past year.

No. 504. Miss G. M., thirty-five years, 1917. Had had symptoms and signs of early pulmonary tuberculosis for six months when coming under observation. Returned to her work in autumn of 1917, and was quite well with the exception of three attacks of so-called appendicitis during the winter of 1918. In July, 1918, was operated on for appendicitis, but extensive tuberculosis of the lower eight feet of the ileum and matting together of the caecum and ileum, with involvement of the caecum was found. Nothing could be done and the abdomen was closed. Patient was lost sight of for twelve months; then came back, reporting that she had been working steadily, feeling well with the exception of four weeks in the autumn of 1918, when she had influenza and bronchopneumonia. She has had no abdominal symptoms whatever, signs in her lungs have increased slightly, but after a short rest she returned to her work where she is continuing in good health.

No. 754. Miss F. C. R., twenty-eight years. Had pleurisy with effusion in spring of 1918, but had been coughing before this. In summer of 1918, had moderately advanced pulmonary tuberculosis of the right upper lobe and left apex. In August had severe pain in epigastrium accompanied by vomiting and fever to 102° . Examination at this time showed definite tenderness in the right lower quadrant with a mass in the region of the caecum. When the acute attack had subsided X-rays showed positive evidences of ulceration of caecum and ascending colon. Operation the end of September showed thickening of the caecal wall and ulceration of caecum and ascending colon. The appendix and the diseased portion of the ascending colon were removed. For a time after the operation symptoms were relieved but gradually returned, and death took place ten weeks later. Partial examination showed that there was a peritonitis with gas and feces in the peritoneum, the anastomosis between the ileum and colon having given away at the base of an ulcer found at this point. There was also further ulceration in the transverse colon.

No. 783. J. B., twenty-two years. In July, 1918, came under observation for pulmonary tuberculosis, moderately advanced upper three quarters of left lung and apex of right. In May, while in France, had an attack of acute diarrhoea following eating of some tinned food which caused an epidemic of this trouble in the battery to which patient was attached. This looseness has continued with two or four stools a day, soft but not watery, considerable flatulence, occasional pain felt with gas rumbling. Examination showed tenderness over the caecum and ascending colon. X-rays were positive but apparently showed a localised disease from the caecum to about half way across the transverse colon. Operation in September showed appendix, caecum, ascending colon, and

first half of transverse colon to be diseased and thickened. This part of the intestine was removed and a lateral anastomosis between the lower end of the ileum and transverse colon was made. All symptoms improved for a couple of months, after which time there was a recurrence of looseness of the bowels and a certain amount of flatulence but no pain. Tenderness of the left side of the abdomen along the line of the descending colon. Diagnosis was made of ulceration of the transverse colon and splenic flexure, and operation was again decided upon, although the condition of the lungs was worse than previously. On April 4, 1919, operation revealed ulceration of transverse colon, descending colon, and sigmoid flexure. The lower end of the ileum was brought out of the abdominal wound and an ileostomy established. During the summer of 1919, there was improvement of symptoms; but in the autumn the temperature became higher, there was loss of weight, cough and expectoration greatly increased. The last examination made a few days ago shows the temperature to be lower, rarely above 99°, condition of the lungs improving, cough and expectoration less, digestion good, weight increasing, and examination of the discharge from the rectum failed to reveal any tubercle bacilli.

No. 876. Miss H. J., twenty-four years, July, 1918. Had been ill for two years with pulmonary tuberculosis, in bed and with fever most of the time. When coming under observation she was found to have extensive disease through the whole left lung with cavitation at the apex, and a few signs just below the clavicle on the right side. Artificial pneumothorax was induced and a partial collapse of the left lung obtained. This was followed with relief of pulmonary symptoms. At this time there was also some slight looseness of the bowels and pain and tenderness in the right lower quadrant. In October, 1918, had acute influenzal attack after which some râles appeared in the back of the left lung. The abdominal symptoms increased and some nausea developed, temperature began to rise and X-rays of intestinal tract showed positive evidences of caecal tuberculosis. Operation was performed on April 29, 1919, and a limited tuberculosis of caecum and ascending colon was found. Three inches of the ileum and about eight inches of the big bowel being excised, and lateral anastomosis performed. Convalescence was uneventful, but in July, 1919, dysphagia and laryngeal symptoms developed with positive signs of tuberculosis of larynx on examination. The laryngeal condition and pulmonary condition were progressive. Death took place on the 29th of January, 1920, evidently due to the pulmonary disease and not to the intestinal.

No. 803. Miss M. A., twenty-six years, 1918. History of pulmonary symptoms for about a year, lungs showing extensive disease all through the left and at apex of the right side. No very definite improvement. In March, 1919, had an acute attack of abdominal pain which persisted in a lesser degree. Some fever accompanied this and examination showed

very marked tenderness in the right lower quadrant, with some thickening probably of the caecum. As the symptoms continued operation was decided on in spite of the advanced lung condition, and was carried out May 5, 1919. Tuberculosis of the caecum, and ascending colon, and lower end of the ileum were found. Six inches of the ileum and the ascending colon as far as the hepatic flexure were removed. There was never any evidences of improvement after this operation and the lung symptoms as well as the intestinal symptoms have become progressively worse, accompanied by high fever, loss of weight, night sweats, and chills. Patient has been removed to her home, but is still living now nearly a year after the operation.

No. 971. Miss M. T., twenty-two years, 1919. Far advanced pulmonary tuberculosis at the left side with symptoms dating back about a year. A couple of months after coming under observation symptoms of gastrointestinal disturbances, especially persistent vomiting occurring about two hours after meals, with pain in the lower part of the abdomen and tenderness in the lower quadrant, and high temperature developed. These symptoms all increased so that the patient's life was a burden and operation was requested. Extensive tuberculosis of the large intestine was found; appendix was removed and an ileostomy performed. The operation was followed by rapid break down of the lung and development of a large cavity below the left clavical, accompanied by expectoration of large quantities of foul smelling purulent material. Death occurred about two weeks later.

No. 945. Mrs. G. E. D., twenty-eight years, March 21, 1919. History of pulmonary symptoms with pleurisy off and on for four years. Examination shows moderately advanced disease of the left lung. Gastro-intestinal symptoms, diarrhoea, pain, flatulence, tenderness in the region of the caecum were present when first coming under observation, and becoming more marked, the pain being quite severe from time to time and accompanied by vomiting during the attacks. Barium meal was positive for tuberculosis of the large bowel, and operation was decided on and performed July, 1919. This revealed ulceration of the lower end of the ileum and one or two areas of thickening in the caecum, and also in the transverse colon. The ileum from above the ulcerated area was planted in the sigmoid and the appendix was removed. Recovery was uneventful and at last report patient was doing well in spite of a temporary setback caused by the death of her only child. Artificial pneumothorax was attempted but was unsuccessful.

No. 784. Miss W. B., twenty years, July 31, 1918. History of short illness with looseness of the bowels from start. Examination showed moderately advanced disease through the upper three quarters of the right lung with left lung involved. Artificial pneumothorax was performed in November with good collapse of the lung and lessening of symptoms. Looseness of the bowels continued with anorexia and some

flatulence and pain in lower abdomen. X-ray examination was quite negative. This examination was repeated four months later and was likewise negative. Patient went to her home in the summer of 1919, returning in August, at which time the abdominal symptoms were decidedly increased and some fever between 99° and 100° each day. Laryngeal tuberculosis had developed and artificial pneumothorax was not successfully continued while at home, so that now there is only a small cavity which was later gradually distended and a fair collapse again obtained. Intestinal symptoms are a watery movement in the morning and a soft movement three or four times a day besides this. Foul odor to the stools, considerable flatulence, nausea most of the time. Operation was decided on and performed September 5, 1919. Before this another X-ray was taken and this was also negative for tuberculosis. The operation revealed one definite ulcer high up in the jejunum and a ring of ulcers around the opening of the appendix into the caecum. The appendix was enlarged and thickened. Some glands in the mesoappendix were enlarged. The appendix and a circular piece of the caecum including the ulcerated area was removed. Abdominal symptoms have completely disappeared, but patient is still under treatment for pulmonary and laryngeal condition.

No. 338. Dr. H., thirty years, October 30, 1915. Had been ill for about a year with pulmonary tuberculosis and some digestive symptoms. These consisted of looseness of the bowels with occasional attacks of pain and nausea, at which time temperature was elevated, considerable flatulence. Examination showed marked tenderness in right lower quadrant with distended movable mass. Per rectum this same mass may be felt on the right side. Although the patient's condition was not favorable he requested operation, which revealed tuberculosis of the ascending and transverse colon. Appendicostomy was done but death occurred a few days later from suppression of urine.

No. 1012. Miss G. K., twenty-three years, June 10, 1919. Influenza October, 1918, symptoms of pulmonary tuberculosis dating from this time. Examination of abdomen shows pain in right lower quadrant, some distention, some resistance on the right side, possibly a little thickening of the caecum; bowels are a little loose, especially immediately after eating, appetite poor, some flatulence. X-ray examination of barium meal showed positive evidences of tuberculous ulceration. As patient failed to improve under regular treatment operation was performed the first of October. Extensive tuberculosis being found all through the small and large bowel, and appendix. The appendix was removed but patient declined steadily and rapidly, dying on the 30th of November, 1919.

No. 1003. Miss K. S., thirty years, May 28, 1919. Indefinite history of pulmonary tuberculosis, symptoms for a year. Moderately advanced pulmonary tuberculosis of right lung. Considerable abdominal pain

coming on after meals, no nausea or vomiting, bowels rather constipated, flatulence. Later on bowels became loose and X-rays of a barium meal were positive for tuberculosis in the large intestine. As pains were becoming more severe and temperature gradually rising, everything pointing to the fact that symptoms were more due to the abdominal condition than to the lungs operation was performed November 13, 1919. This revealed extensive tuberculosis of caecum, ascending and transverse colon, and small intestine being free. Anastomosis between ileum and sigmoid was performed and the appendix removed. There has not been any improvement following the operation and patient still has high fever, night sweats, and general symptoms of advanced tuberculosis.

No. 119. Mrs. E. W., twenty-nine years, October 16, 1919. Complains of stomach trouble for three years, cramps felt in epigastrium, nausea and vomiting. These attacks would last about twenty-four hours. Patient run down and losing weight recently. Examination showed early disease in the upper part of the right lung. Examination of the abdomen showed marked tenderness in the region of the caecum, no thickening determined. X-rays were positive for caecal tuberculosis. Operation was performed November 24, 1919, and revealed chronic appendicitis and thickening of the walls of the caecum. The appendix was removed but caecum was left. On returning after the operation there was an increase in all the abdominal symptoms and also in the pulmonary symptoms, and an extension of pulmonary disease. The disease, both the abdominal and pulmonary, has been progressive since.

No. 1173. Mrs. M. N., twenty years, December 15, 1919. Moderately advanced disease of the whole of the left lung. Has been run down for about six months, has been some looseness of the bowels and abdominal cramps for past week, before which time no digestive disturbances were noted. Examination showed very marked tenderness in the right lower quadrant but nothing beyond this. X-ray positive for intestinal tuberculosis. As the pains were increasing and becoming more frequent and digestive disturbance more marked operation was decided on and performed February 24, 1920. This revealed ulceration through the greater part of the small intestine, caecum, ascending transverse, and descending colon down as far as the sigmoid. The appendix was removed and nothing else done. Since operation there has been no abdominal pain, but the looseness of the bowels and flatulence continues, temperature has been elevated each day and patient is rapidly losing strength.

INTESTINAL TUBERCULOSIS.

Summary of Cases.

Total number of cases operated on.....	22
Total number of operations	23

Operations		Results		
Excision	9	Alive and well	3	
		Alive—improved	2	
		Alive—unimproved	1	
		Dead	3	9
<hr/>				
Simple Laparotomy	2	Alive and well	1	
		Dead	1	2
<hr/>				
Ileosigmoidostomy and Appendectomy	3	Alive and well	1	
		Alive—improved	1	
		Alive—unimproved	1	3
<hr/>				
Appendectomy	6	Alive and well	1	
		Alive—improved	1	
		Alive—unimproved	2	
		Dead	2	6
<hr/>				
Appendicostomy	1	Dead	1	1
Ileostomy	2	Alive—improved	1	
		Dead	1	2
<hr/>				
Total Cases	22	Alive and well	6	27.2%
		Alive—improved	4	18.1%
		Alive—unimproved	4	18.1%
		Dead	8	36.3%
<hr/>				
			100%	
Cases in whom death was hastened by operation			3	

In conclusion I wish to thank Drs. Archibald and Bazin of Montreal, Dr. R. N. Brown of Saranac Lake and Dr. Lothrop of Buffalo and other surgeons for their operative treatment of these cases, and also Mr. H. L. Sampson for his painstaking and skillful X-ray diagnosis.

Clinical and Pathological Notes

Reports from the Roentgen Ray Department of the Albany Hospital. Reported by JOHN M. BERRY, M. D.

The clinical history of a medical or surgical case is sometimes misleading, and the clinical diagnosis may be wrong. As a consequence, any aid to a correct diagnosis is much to be desired.

The X-ray is *one* of the greatest, if not *the* greatest aid to diagnosis that the practice of medicine and surgery has at the present time; but, because it is only an aid and can not be relied upon to give an absolute diagnosis in all cases, it is best used in connection with clinical histories and findings.

A good X-ray examination helps to confirm or reject a clinical diagnosis, on the other hand, a good clinical history and examination serves to indicate or point out the character of the X-ray work needed in that particular case.

The one method of diagnosis should be used to check up the other and vice versa.

The Roentgen Ray Department of the Albany Hospital has arranged to give a monthly conference at which interesting and instructive cases are discussed impersonally. A short clinical history of the case, the clinical diagnosis, the indications for X-ray examination, the X-ray findings and diagnosis and the final diagnosis as confirmed by clinical methods, operation, or autopsy, are all presented and discussed.

The first of these conferences was held in the rooms of the department at 4 P. M., April 23, the second was held at the same hour, Friday, May 21.

The following cases were presented by Dr. Berry and Dr. Howard:

DETAILED REPORT CASE No. 3

The patient was a young adult, male. He complained of a pain in the region of the right ankle. The patient could locate the point of pain with the tip of his forefinger. The point was somewhat sensitive to pressure, and was situated about one inch above the front of the ankle joint and about one inch from the outer side, this corresponded to the outer edge of the anterior surface of the tibia.

The family history was unimportant.

The patient sprained his ankle badly when a boy, no history of typhoid fever, rheumatism or symptoms suggesting tuberculosis.

The present illness began several years ago. The symptoms were slight, at first, and the patient was treated for weak feet. He wore Whitman arch supports, and seemed to get relief for a time. For the past few weeks the trouble had been steadily increasing. The pain was severe and steady, but was present only in the evening and at night. There was no trouble during the day; but, as the patient expressed it, "About sundown" the pain began and became so severe that he could not sleep, but walked the floor, used hot water bags, etc., until, after several hours, the pain decreased and he was able to get some sleep.

The examination of the foot was negative except for the point of tenderness before described, the temperature was normal, the white blood count 6,400, the Wassermann reaction was negative.

Clinical Diagnosis.—Tuberculosis, osteomyelitis, or bone cyst.

The X-ray examination showed a small oval, rarified area, in the lower end of the tibia (see illustration). This area was about 1 cm. by $\frac{1}{2}$ cm. and was situated in the lower end of the tibia near the outer side. Stereoscopic roentgenograms showed that the rarified area was situated about midway between the anterior and posterior surface of the bone.

This situation corresponded exactly to the point of pain and tenderness complained of by the patient.

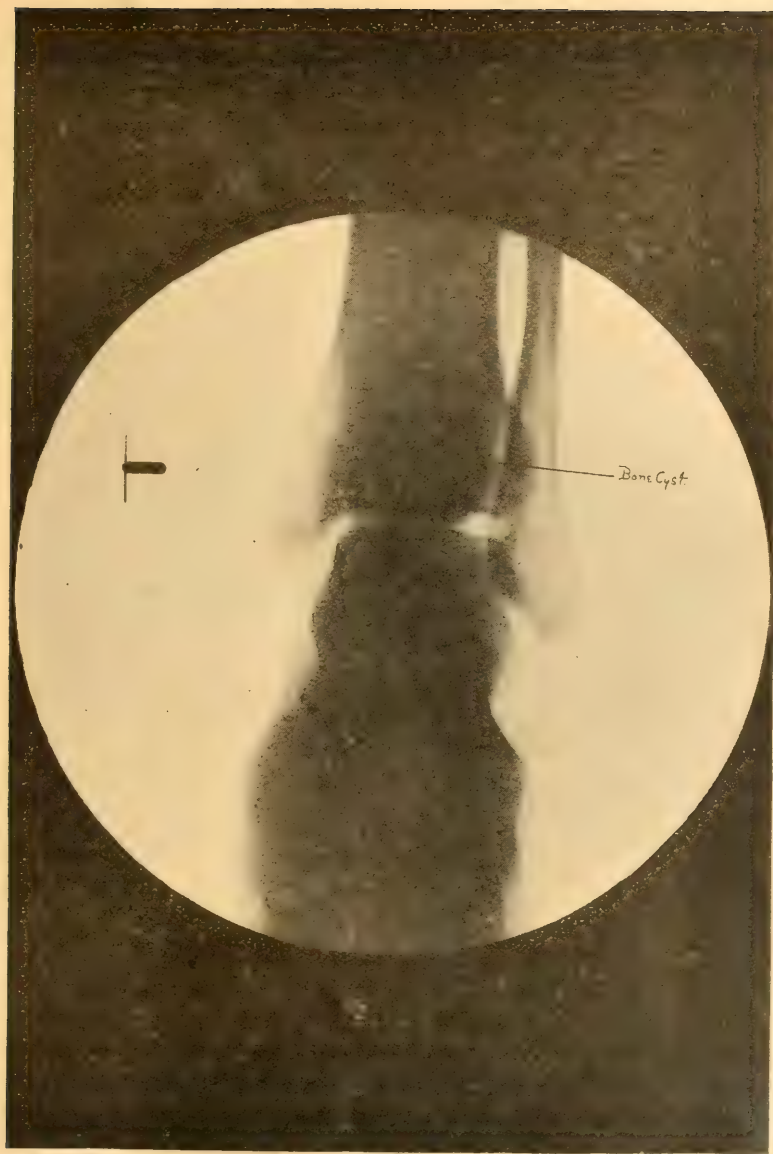
The *X-ray Diagnosis* was bone cyst.

The patient was operated upon, an incision being made over the front of the ankle, exposing the tibia over the affected area. The periosteum was incised, stripped back, and the bone chiseled away until the rarified area shown by the X-ray was reached. This proved to be a bone cyst containing blood-stained fluid. The walls of the cyst were curetted and the wound was closed without drainage. The Pathological report showed spongy bone and granulation tissue.

The wound healed, the symptoms were relieved, and several months have elapsed since the operation, and there has been no return of symptoms.

Case Number	Clinical Diagnosis	X-ray Diagnosis	Final Diagnosis	Remarks
1	Hydronephrosis	Stone in right kidney.	-Operation-Hydronephroma with calcarous deposit.	Very unusual shadow in region of right kidney.
2	Empyema	Pyopneumothorax	-Operation-Pyopneumothorax	The X-ray diagnosis was made by taking pictures in both vertical and horizontal positions—noting shifting of air bubble.
3	Osteomyelitis, tuberculosis, or bone cyst.	Bone cyst.	-Operation-Bone cyst.	Unusual history. See detailed report following.
4	Bilateral acute mastoiditis.	1st case Inconclusive. 2nd case Granulations or pus in left mastoid, breaking down of cells over lateral sinus.	1st case -Operation-Bilateral acute mastoiditis. 2nd case -Operation-Granulative tissue and pus in mastoid, thrombosis of lateral sinus.	The X-ray was of more value than the clinical history in one of these cases and in the other the clinical history was more value than the X-ray.
5	Carcinoma of sigmoid.	Carcinoma of sigmoid.	-Operation-Carcinoma of sigmoid.	X-ray diagnosis made on presence of filling defect.
6	Questionable neuralgic pains.	Metastatic generalized carcinoma.		Left breast amputated for adeno carcinoma three years ago.
7	Constipation	Acute kinking at splenic flexure, very low position transverse colon.	-Operation-X-ray was confirmed.	Constipation relieved.

Case Number	Clinical Diagnosis	X-ray Diagnosis	Final Diagnosis	Remarks
7	Same Patient later. Acute intestinal obstruction.	Partial obstruction in jejunum.	-Operation— Adhesions and volvulus in jejunum, about two feet beyond pylorus.	Patient relieved.
8	Ulcer of stomach. (2 cases)	Ulcer of stomach.	-Operation— Ulcer of stomach.	In two of these cases X-ray diagnosis was made from the visualized crater, in the other two from gastric irritability.
9	Ulcer of stomach. (2 cases)	Ulcer of stomach.	-Operation— Ulcer of stomach.	
10	Gall stones.	Gall stones.	-Operation— Gall stones.	
11	Mass in the right side of the abdomen.	Shadow of mass shown, displacing large bowel.	-Operation— Hydrops of gall bladder and gall stones.	
12	Aneurism of arch of aorta. Pneumonia.	Aneurism, consolidation of lung fluid or thickened pleura.	-Autopsy— Ruptured aneurism, pneumonia.	This case was diagnosed outside the hospital as tuberculosis of the lungs, a not uncommon diagnosis in cases of aneurism.
13	?	Synostosis, bones of skull.		
14	Stone in urinary tract?	Stones in kidney, multiple stones in ureter.	-Operation— Removal of stones.	Shadows resembling stones recurred in a few weeks.
15	Neuralgia?	Abscess at root of tooth.	-Operation— Removal of tooth. Abscess found.	Patient relieved.



ROENTGEN RAY DEPARTMENT, ALBANY HOSPITAL.
CASE OF OSTEOMYELITIS, WITH CYST

A Light that Delights. By W. H. MORSE, M. D., *Hartford, Conn.*

Every effort made by the churches to reach the Russian immigrants proved unavailing. They did not repel or resist, but simply showed silent obstinacy. All of the pastors, the Methodist deaconesses, the Congregational Sunday School workers, the Presbyterian Endeavorers, the Y. M. C. A. men and many others put forth their best exertions. The newcomers did not manifest the least interest in religious matters. There was a Russian Orthodox church in a neighboring city, but they did not go there to worship. On Sundays they were as well behaved as any of the factory people, and spent the day in their own colony. When, after a while, some of the young men and women began to attend the evening school, some hope was expressed that it might prove the opening wedge; but it did not make any difference. After the return of the Rev. Dr. Robert S. McArthur from Russia, and the coming of Pastor Fitler, and at a later day after the Russian mission of Elihu Root, renewed efforts were made. But it was all in vain. The colony numbered more than two hundred, and it was with much reluctance that they were labeled heathen.

It occurred to me that as a physician I might get in touch with them. By means of professional work I had had success in getting Italians and Hungarians interested, and it seemed quite reasonable that I might have the same results with them. It was therefore that I decided to undertake it upon the first opportunity. Before it could transpire two or three things came to my attention which were disheartening. The teachers in the public schools were not able to have the adenoids of some of the little Russians attended to. The parents refused the operation. When one of the women met with an accident in the factory, she refused all surgical attention. An elderly man died in the colony, but no physician's certificate was obtainable by the undertaker for the board of health. When there was an epidemic of measles, and it reached the colony, there was no medical attendance. New babies appeared among the Russians, but there were no returns made by either physicians or midwives.

"It is my opinion," said the secretary of the health board,

"that those people will not employ medical men. Some superstition there!"

But I was not convinced as to this being the case, and kept my anticipation in shape, until finally it was rudely overthrown. One of the girls in the evening school annoyed others by coughing, and was offered some cough syrup. She thanked the girl who had made the offer, and added,—

"I couldn't, for we do not take medicine!"

When this reached me, I had the floor boss at the factory ask some of the operatives about it. Then it came out that the Russians declined to use all drugs, and would not on any account consent to surgical treatment. The opportunity which I had fancied was evidently impracticable.

"But what do you do when you are sick?" the floor boss asked.

"We rubs. We brethes up hard. We sits out in the sun. We ride in the cars. We rests. We—come over all right yet!"

I took this peculiar answer into consideration, and proceeded to work out a plan. I had my printer prepare me a special letter head, as follows:

No Drugs

No Knife

DR. W. H. MORSE

Specialist in Treatment of Disease by Psychotherapy, Electrotherapy, Phototherapy, Vibratory Massage, Oxygenation.

179 Zion Street, Hartford, Conn.

OFFICE HOURS, 1 to 3 P. M.

TELEPHONE CHARTER 1793-5.

I then wrote, under this letter head a letter to one of the young men in the evening school, Ichael Mannz, asking him if he could undertake some copying for me, his teacher having told me that he wrote a "regular copper-plate hand." The young man came for the manuscripts that same afternoon. I waited with some impatience to see if my plan would materialize.

It did. It was not long—not more than three or four days—before I was called to a case of chronic rheumatism in the colony. The patient wanted vibratory massage, and she received the treatment. A case of sciatica came to the office shortly after, and I made use of the electric battery. I was afraid the patient might object, but he did not do so, and after that I had others in the treatment of which I employed the electricity with good results. Electrotherapy and massage, the battery and the vibrator! The success was first-rate.

I found that the ailing were accustomed to sit out in the sunlight, and that they attributed healing virtues to the solar rays. As soon as I had learned this, I proceeded to bring the phototherapy forward. When I explained about the light from the leucodescent lamp affording healing rays, the same as was afforded by the rays of the sun, and showed that the lamp was available at any time, their eager cry was, "O the made-sunlight in the dark-time hours!" And they were eager to have it done. That "made-sunlight" appealed to them, and I had the opportunity of trying it on a considerable number of cases.

Incident thereto I procured some of the Tract Society's Russian leaflets on "Jesus the Light of the World," which I gave out. With this I had a Russian translation of the hymn, "Sun of My Soul," prepared and distributed. This I followed by speaking of our Lord as the Sun of Righteousness, and magnified His glorious light. At once the colonists were impressed. The hour for action struck. Quietly remarking that in the Protestant churches the Divine Light was made manifest, I had one of the enthusiastic workers come with me on a Sunday afternoon, and conduct an outdoor meeting in a field in the rear of the Russian tenements. He spoke to them from Acts 27:20, and with excellent effect. They saw and felt the Light after the sun had been so long withdrawn. The darkness comprehended it. From that time the work was wonderfully blessed, and still continues. And—with "no drugs," "no knife,"—I have the colony practice.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

DEATHS FOR THE MONTH OF JULY, 1920.

Consumption	13	Broncho-Pneumonia	3
Typhoid Fever	0	Bright's Disease	6
Scarlet Fever	0	Apoplexy	7
Whooping Cough	0	Cancer	18
Diphtheria	0	Accidents and Violence.....	9
Influenza	0	Deaths under 1 year.....	10
Measles	1	Deaths over 70 years.....	25
Diarrheal Diseases	4	Death rate	10.64
Pneumonia	2	Death rate less non-residents	9.31

Deaths in Institutions.

	Non- Res.	Res.		Non- Res.	Res.
Albany Hospital	6	7	Homeopathic Hospital ..	4	2
Maternity Hospital	0	2	Public Places	0	5
Albany Co. Hospital....	0	2			
Albany Hospital T. S....	0	5		14	30
St. Peters Hospital....	2	3	Births		194
Home for the Aged....	1	1	Still Births		9
Hospital for Incurables.	1	3			

DIVISION OF COMMUNICABLE DISEASES.

Typhoid Fever	10	Tuberculosis	19
Scarlet Fever	5	Mumps	9
Diphtheria and Croup.....	2	Pneumonia	17
Chickenpox	6	Influenza	0
Smallpox	0	Septic Sore Throat.....	1
Measles	104		
German Measles	2	Total	221
Whooping-cough	46		

Number of days quarantine for scarlet fever:

Longest..... 30 Shortest..... 30 Average..... 30

Number of days quarantine for diphtheria:

Longest..... 30 Shortest..... 15 Average..... 21

Fumigations:

Rooms..... 52 Buildings..... 129

Milk bottles disinfected..... 941

Communicable Diseases in Relation to Schools.
(Schools Closed.)

Reported
D. S.F. M.

MISCELLANEOUS.

Cards posted for communicable disease	111	Children examined for employment certificates	63
Cards removed	128	Number of employment certificates issued (56 vacation certificates)	118
Notices served on schools..	0	Taking specimens of blood for Wassermanns.....	0
Notices served on stores and factories	13	Taking smears for gonococci	0
Postal card returns sent to doctors	111	Postal cards sent to milk dealers	61
Postal card returns received from doctors	128	Dogs examined for rabies...	1
Inspections and reinspections	113	Dogs re-examined for rabies	1
Vaccinations	3		
Vaccination dressings	10		

Tuberculosis.

Living cases on record July 1, 1920.....		796
Cases reported:		
By card	19	
Dead cases by certificate.....	2	21
		<hr/>
		817
Dead cases previously reported.....	11	
Dead cases not previously reported.....	2	
Removed	23	
Died out of town.....	1	37
		<hr/>
Living cases on record August 1, 1920.....		780
Total tuberculosis death certificates.....		13
Visits to cases of tuberculosis.....		240
Miscellaneous visits		70
Visits to physicians.....		6

LABORATORY REPORT.

Diphtheria.

Initial Positive	14	Unsatisfactory	9
Initial Negative	169		
Release Positive	23	Total	300
Release Negative	85		

Sputum for Tuberculosis.

Positive	61	Unsatisfactory	1
Negative	80		
		Total	142

Widals

Positive	12	Unsatisfactory	7
Negative	36		
		Total	55

Wassermann tests (positive 30)	246	Gonorrhoea Examinations (positive 15)	65
Milk Analyses	161	Miscellaneous Examinations.	10
Water Analyses	1	Total Examinations	980
Pathological Examinations..	0		

HEALTH PHYSICIANS' REPORT.

Cases assigned	31	Calls made	64
----------------------	----	------------------	----

DIVISION OF SANITATION.

Complaints	55	Reinspections	75
Inspections	52	Plumbing	13
Plumbing	17	Sanitary	62
Sanitary	35		

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	123	Smoke	0
Old Houses	65	Blue or red.....	2
New Houses	58	Peppermint	2
Permits issued	52	Water test	14
Plumbing	45	Houses examined	26
Building	7	Re-examined	65
Plans submitted	9	Valid	18
Old buildings	2	Without cause	8
New buildings	7	Plumbers' license plates...	1
Houses tested	18		

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	14	Total	45
Dogs removed	13	Cases eggs removed.....	47
Cats removed	18	Tub eggs removed.....	1

DIVISION OF MARKETS AND MILK.

Public market inspections..	23	Milk cans inspected.....	338
Market inspections	106	Milk cans condemned.....	0
Fish market inspections.....	11	Lactometer readings	70
Fish peddler inspections.....	0	Temperature readings	70
Slaughter house inspections.	4	Fat tests	2
Rendering establishment in-		Sediment tests	7
spection	0	Chemical tests	0
Pork packing house inspec-		Cows examined	785
tions	3	Cows quarantined	4
Hide house inspections.....	2	Cows removed	5
Milk depots inspected.....	31	Complaints investigated	3
Stores inspected	69	Milk houses inspected.....	63
Dairies inspected	63		

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—STATISTICS FOR AUGUST, 1920.—Number of new cases, 226; classified economically, 87; free—bed cases, 26; prenatal, 5; dispensary soc. service, 31; tuberculosis (pos.), 9; tuberculosis (super.), 2; hospital social service, 11; venereal social, 3; paid, 139; limited means, bed cases, 65; metropolitan, bed cases, 61; metropolitan, prenatal, 10; industrial, bed cases, 2; industrial, social cases, 1; Western Union, 0. Cases carried over from last month, 703; bed cases, 69; prenatal cases, 30; dispensary social service, 2; tuberculosis (total), 456; hospital social service, 45; venereal, 101; industrial, 0; Western Union, 0. Classification of bed cases: Medical, 89; surgical, 5; obstetrical, 35; prenatal, 15; confinements, 34; maternity, 5; miscarriages, 4; number of babies born, 36.

Visits of Nurses (all departments), 1,428. For bed care, 978; prenatal instruction, 48; tuberculosis (supr. and inst.), 21; venereal diseases, instr., 55; hospital social service, 35; general social service, 84; for other purposes, 163; dispensary social, 29; supervision, 15.

Source of Nursing Cases.—Metropolitan agents, 37; doctors, 91; nurses, 2; dispensary, 5; family or friends, 13; other sources, 18.

Disposition of Bed Cases.—Discharged recovered, 41; discharged improved, 69; discharged unimproved, 28; discharged dead, 9; discharged to other care, 34; carried, 91. Disposition of other cases: Prenatal—discharged to maternity care, 24; discharged to hospital, 0; discharged to other care, 1; carried, 20. Dispensary social service—discharged dispensary care, 33; carried, 2. Hospital social service—discharged home, 4; discharged dead, 2; discharged to dispensary, 4; discharged to Pavilion "F," 0; discharged lost, 0; carried, 50. Venereal—discharged cured, 0; discharged temporarily, 9; discharged to other care, 2; carried to dispensary, 29; carried under supervision, 54; carried under care at the

House of Good Shepherd, 19. Tuberculosis—discharged dead, 6; discharged, left town, 0; discharged, not T. B., 0; carried (positive), 312; carried (supervision), 151. Industrial—discharged (soc. or bed cases), 0; carried, 0. Total number of cases carried over into September, 637.

South End Dispensary Report.—Number of clinics, 91; surgical, 14; medical, 9; gynecological, 9; prenatal, 3; eye and ear, 16; venereal, 4; nerve, 4; nose and throat, 9; skin, 5; children, 9; lung, 0; children's lungs (observation clinic), 0. Clinics with doctor attending, 87; clinics without doctor attending, 4; number of new patients treated, 121; number of old patients treated, 434; total number of patients, 555; total number of ear irrigations, 229.

Industrial Dispensary, at Huyck's Mills.—Number of clinics held, 16; number of new cases treated, 17; number of old cases treated, 106; total number treated, 123; number of physical examinations, 11.

No industrial cases are really discharged, but we do not add them on to our cases carried nor do we add on the South End Dispensary cases as carried on our general report. They are kept separate.

FIRST REGIONAL CONFERENCE IN WASHINGTON IN DECEMBER.—The first of a series of regional health conferences authorized by the International Health Conference in Cannes is to be held in Washington, December 6-13. It will be devoted to a consideration of venereal diseases which, according to conservative estimates, constitute one of the world's most terrible plagues.

The conference is being organized under the joint auspices of the U. S. Interdepartmental Social Hygiene Board, the U. S. Public Health Service, the American Red Cross and the American Social Hygiene Association. Prof. William H. Welch of Johns Hopkins has consented to serve as president, and already assurances have been received that some of the foremost physicians and sociologists will participate. Prominent health officers and sociologists from all parts of North and South America will attend.

The conference will review past experiences and existing knowledge as to the causes, treatment and prevention of venereal diseases, and will formulate recommendations relating to a practicable three year program for each of the North and South American countries participating. In addition it will make suggestions for putting such programs into effect.

In speaking of the proposed conference, Surgeon General Hugh S. Cumming, of the U. S. Public Health Service, said, "The United States is in the front rank of the countries which have organized against the Great Red Plague, and a consideration of the various measures which have proved of value in different communities will undoubtedly contribute much to further progress in the countries represented at the conference. More than any other important communicable disease, the spread of the Great Red Plague is inextricably bound up in a mass of social, economic, educational and recreational problems. The success

thus far attending the campaign against the venereal diseases is due largely to the fact that this interrelation has been recognized and that the campaign has enlisted the co-operation not only of physicians and sanitarians, but of sociologists, judges, probation officers, educators, the clergy and good citizens generally."

POLISH SURGEONS USE COTTON OPERATING GLOVES.—Ether, rubber goods and dressings were found to be the greatest needs in Polish hospitals by the Red Cross relief investigators. Surgeons are forced to use cotton gloves when operating or else operate with their bare hands. A small amount of chloroform is the only anesthetic. While in one of the military hospitals in Crakow a nurse brought in a handful of gauze which had been washed and rewashed at least fifteen times to use as dressings. The low quality of gauze, sponges and absorbent cotton was demonstrated by dipping them into water. They came out almost dry.

The city of Crakow has six military hospitals with from six hundred and fifty to eighteen hundred beds each. In the same district, but outside the city, are sixteen military hospitals with a total of 10,106 beds. They are, for the most part, admirably arranged and conducted, Americans report.

In the eight civil hospitals in the city there is a total of 2,500 beds. Most of them are overcrowded and turning patients away. One small civil hospital with two operating rooms averages twenty operations a day. In some wards there are two patients in a bed.

A special activity of the Red Cross now is to relieve these frightful conditions existing in Poland. The work is under the direction of Dr. A. J. Chesley, well-known public health expert of Minneapolis, Minn.

DISEASES IN MONTENEGRO.—Three hundred different ailments are mentioned in the detailed reports for the last month of the four Red Cross hospitals operated in Montenegro. Thousands of ragged, half-starved men, women and children line up daily before the dispensaries in Cetinje, Podgoritz and Niksic.

Scabies is the most common of all diseases. Eye infections are almost as prevalent, while malaria, rheumatism, tuberculosis, gastritis, malnutrition, bronchitis, worms, constipation, influenza and otitis media are equally common.

The American Red Cross clinics have treated cystitis, gunshot wounds, diphtheria, liver derangements, goitre, neuralgia, neuritis, hernia, ascites, myocites, old scars, bursitis, pleurisy, fractures, typhus, paralysis, toothache, arterio-sclerosis, herpes, appendicitis, mastitis, haemorrhoids, osteomyelitis, ulcers, diseases of the throat, diarrhea, neurasthenia, cysts, eczema, scurvy, diseases of the kidney, meningovels, abscess, colds, mastoiditis, disease of the heart, hydrocele, polio-mylitis, measles, burns, Parkinson's disease, fistula, and varicose veins.

In addition to these common complaints scores of rare diseases have been treated.

In Memoriam

BYRON U. STEENBERG, M. D.

Dr. BYRON USHER STEENBERG, a graduate of the Albany Medical College of the Class of 1870, died at his home in Albany, N. Y., on Sunday morning, August 22, 1920, in the eighty-second year of his age. He suffered from cardiac symptoms for three days.

Dr. Steenberg had continued in active practice to the time of his death. He was born in Malta, Saratoga County, N. Y., April 18, 1839, and was a descendant of a long line of physicians. His father and his grandfather both practiced in the Northern part of the State of New York for many years. After graduation Dr. Steenberg began general practice in Clinton Avenue, Albany, and he remained for fifty years in the same part of the city. He had been president of the Albany County Medical Society, and also had acted as Vice-President and Secretary. He was also a prominent member of the Medical Society of the State of New York, had been an attending physician at the Albany County Almshouse, and has occasionally assisted in the work of instruction at the Albany Medical College, at one time having been demonstrator of anatomy.

A few weeks before his death he reported a history of his College Class and its members for the Annual meeting of the Alumni Association. He was unable to attend the reunion in June, and entered his report with the following touching valedictory:

"Almost fifty years of ceaseless service have gone by in an effort to relieve the ills and sufferings of humanity. It has been an arduous life as that of a busy physician must of necessity be, but the usual allotment of sunshine and shadow has tempered the years, and now, standing amid the evening shadows, and the work of life almost at an end, there is not one regret for the youthful choice of a profession so great in opportunity to serve humanity.

"The majority of the happy class of '70 has passed into the great beyond and but a few of us are left. Nothing would give me more pleasure than to look into your faces and feel the clasp of your hand, but the weight of years keeps me closely tethered to home. To all, with deep feeling, I utter the words, 'Hail and farewell.'"

Dr. Steenberg is survived by his wife, an adopted son, Victor Steenberg, who is in Wyoming, and a sister, Mrs. Dora Van Arnheim.

HENRY E. MERENESS, M. D.

Dr. HENRY E. MERENESS, who graduated from the Albany Medical College in 1874, died suddenly at his home in Albany, N. Y., on August 4, 1920, during an attack of angina pectoris.

Dr. Mereness had been conscious of heart affection for several years, but had controlled himself admirably and had been able to continue in active business.

Dr. Mereness was born at Sharon Centre, Schoharie County, March 19, 1840. He was the son of Stephen Mereness, a native of Schoharie and a farmer by occupation. His mother was Julia Sharp.

Early in life Dr. Mereness evinced a desire for literary work. He received his early education in the Fort Plain public schools and in the Knoxville academy. When but sixteen years old he became a teacher but later to finish his education he came to the State Normal school in Albany. He graduated from there in 1869. For three years after that he studied with the late Dr. James H. Armsby and then went to the Albany Medical college where he was graduated as the valedictorian of his class in 1874. He later gained a large practice. His specialty was obstetrics and his skill and success were highly marked. During all the time he practiced he kept the same office. For several years Dr. Mereness was treasurer of the Albany Medical Society and subsequently surgeon for the United States Marine recruiting service, serving for the post of Albany.

He was a member of the Knights of Pythias, Albany Club, Ancient City Lodge 452, F. and A. M., Temple Chapter 5, R. A. M., DeWitt Clinton Council 22, R. and S. M., and Cyprus Temple of the Mystic Shrine. He was also a veteran Mason. In 1878 Dr. Mereness married Miss Carrier, of Albany, and two children, Mrs. Taylor, of New York, and Dr. Harry E. Mereness, also of New York, were the result of the union.

FREDERIC L. CLASSEN, M. D.

Dr. FREDERIC L. CLASSEN, an alumnus of the Albany Medical College of the class of 1881, died in Albany, N. Y., on the morning of August 13, 1920, after an operation for appendicitis. The symptoms of the disease had been present for some time, but had not become threatening until a few hours before the operation undertaken as a last resource.

Dr. Classen was historian of his college class, and after thirty years of practice reported that he had been engaged in the quiet and active pursuit of his profession in Albany since his graduation. He has been coroner's physician of Albany County, and has been particularly active in the Masonic fraternity, having received the highest honor of that body when in 1914 he was crowned Grand Inspector General, thirty-third and last degree. At the time of his death Dr. Classen was one of the consulting physicians of the New York State Drug Clinic, which was appointed to assist and relieve drug habitues. His death occurred within a few months of his sixty-third birthday, as he was born in Albany in 1857. He is survived by his wife who was Miss Ella McCracken, and a son, Mr. Philip L. Classen, who is assistant corporation counsel of the city of Albany.

ALBANY MEDICAL ANNALS

Original Communications

SOME NOTIONS OF A COUNTRY DOCTOR.

*The President's Address, read at the Fourteenth Annual Meeting of the
Third District Branch of the Medical Society of the State of
New York, Hudson, N. Y., October 14, 1920.*

BY LUTHER EMERICK, M. D.,

Saugerties, N. Y.

That the social order in our country is changing no observing person will deny; but whether for better or worse in all particulars there is chance for difference of opinion.

Rural communities have always and must always furnish a large part of the supplies of both men and materials upon which cities exist and thrive. This is well so long as the cities take only the surplus above what the rural communities need for their own welfare; but when migration to the cities is so large that rural communities are forced to curtail their activities because of lack of population to carry them on, it becomes a matter of serious economic importance, which is worthy of the best thought of our best minds to discover the cause and a remedy for it.

That our cities are increasing in population and our rural communities decreasing our census figures plainly show and observing minds also believe that we are close to the point where much increase of the ratio of city population to country population would not only menace the welfare of the cities but of the nation as well.

One of our statesmen said years ago that the permanence of a nation depended upon a prosperous and contented country people, and what was true then is true now.

Sufficient food for our cities can only be maintained by a contented country people who believe their lives and occupations are as respectable as those of any other class and therefore are willing and plan to reside permanently in the country, who believe the country is a good place to live in and a good place to die in.

But the sentiment of the times is against country life. Our daily papers by their cartoons attempt to make country life and occupations ridiculous. Our schools educate away from the country, and the country man, whether laborer, mechanic or professional, is treated as an inferior by those of his own class who live in the cities.

Before we can hope for a contented country people this attitude of the people toward the country man must change. Country life must be made as attractive as city life. The country man must have returns for his labor equal to those of his own class in the cities. He must have a chance for his children to be so educated that they will not despise and feel disgraced by their country parentage. He must also have the opportunity of securing medical and religious attention, in case of sickness, in the same way that city residents do and not through any wholesale paternalistic scheme. Finally he must be treated like a civilized human being and not like a social outcast. Given these things the question of sufficient food supply for the cities will take care of itself. There will be enough country people to attend to it. Deprived of equal rights with city people there will soon be no country people.

With part of these questions we have no special responsibility, but with medical attendance we must assume full responsibility both for the present and the future.

After hearing one of the papers that is on our program for today I think every one here will believe that we are scarcely meeting our responsibilities at present and that we still will fall far short of furnishing sufficient men in the near future to properly care for the health of our country people.

In business any method which fails to produce satisfactory results is discarded or modified, not so in the control of medical matters. For years we have been hearing the cry "Raise the

standards," and parrot-like have been repeating it until at last we have the standards practically prohibitive to the class from which most of the country doctors of to-day came; and we are occasionally hearing gloomy predictions as to the future of the profession but we hear no hint of anything effective being done to remedy it.

Almost, if not all laws, affecting medical education and practice originate with the profession and the profession is plainly responsible for conditions to-day. Eight or ten years of preparation, after leaving high school, to enter a profession the returns from which are very uncertain and the practice of which is so hedged in by restrictive laws that its members do not know whether they are citizens or criminals, does not and should not appeal to any self-supporting, red blooded, American boy. And to say that it is necessary brands a large percentage of the practising doctors of to-day as incompetent. Some rich men's sons may still be found to take up the profession but few of them will settle in the country where doctors will soon be needed. If the country is to be furnished with doctors they must come from country-raised boys, for country practice does not appeal to city-raised doctors any more than city-raised doctors appeal to country people and, with all due respect to the learned men who arrange our educational regulations, I believe that six months of country practice or six months in a country doctor's home would greatly change their views as to what a boy should study to make a country doctor. However, as things stand at present we still hear the cry "Maintain the Standards" and in the same breath are told that "Compulsory Health Insurance, State Medicine or Nationalizing of Health Agencies" is sure to come because the sick are not properly cared for. And it surely will come if we all go telling people it is sure to come and then go out and work for it.

I have been both amused and angered during the past two years to hear some speaker, supposed to speak against the centralization of medical control, preface his remarks with the statement that it was sure to come and then half heartedly talk against it. I would have respected him much more if he had openly defended it.

I can see little difference in the final effect upon the general practitioner, between Compulsory Health Insurance, State Medicine or Nationalization of Health Agencies, as they all mean elimination of the independent general practitioner and autocratic control of medical matters; with fat salaries for the few and bare existence for the many. These schemes are all advocated by men who claim that there is a great dearth of medical attention, but by centralization of power efficiency can be so increased as to make up for this lack. Surely this is an alluring prospect if we are to judge efficiency by the government control of railroads.

These promoters seem to forget that there must be a continual supply of new doctors even to make their schemes work. They all overlook the fact that some of our American doctors believe that they have a right to life, liberty and the pursuit of happiness, and that they refuse, except in time of war, to be tagged, labeled and bossed by some bureau head.

But while our law-making brethren are fretting over different bills, striving to get one that will placate enough of us to make it workable, we must not forget that the care of the sick is our problem and if we don't solve it they will take it from us and give it to those who will. They care little about the years in preparation—they want some one to do the work. Rural districts are now asking, and they will soon be demanding doctors to look after them. They are not asking for specialists; the cities have enough specialists to look after all the unusual conditions that may arise and the country people in most instances are willing to go to them. The country people are asking for doctors, general practitioners, men educated to meet emergencies and treat the usual every day diseases, which after all make up the largest part of human ills. These people want doctors to treat them in their homes but they don't want ambulances to carry them to centers convenient for government doctors to attend.

The job is before us. If our country population is to be preserved they must have attention in time of sickness. Are we going to do it or are we going to turn it over to our chiropractor friends or some other cult?

Sometimes when I get thinking of the conditions surrounding us I wonder if the powers that be have decided that there is no place in this country for the general practitioner, that all they plan to have are college professors, department controlled specialists and government officials; but when I have about decided that this is what is coming I recall the almost unanimous opposition shown last year of high and low in the profession when it seemed that the iniquitous Compulsory Health Law was to be loaded upon us and this remembrance makes me hope and trust that, whatever may be attempted, we have in our profession men with sufficient patriotism, vision and influence to defeat all schemes for centralization of control and destruction of individual initiative and incentive; that there will be found a place for the general practitioner who will be a worthy successor of the family doctor of years ago in his close touch with the family life of his patients, in his interest in their welfare, both for time and eternity, in his sympathy with all their troubles; who will have nerve and knowledge to do an appendectomy or operate upon a strangulated hernia in an emergency when roads are bad and specially trained men cannot be had, but who will turn these patients over to the care of specialists when it can be done; who will feel a respect amounting almost to reverence for the true specialist who helps him in his difficulties, but a disgust approaching hate for the would-be specialist who attempts to bluff or patronize him.

We have such men scattered all through the rural districts to-day and the welfare of the profession and of the country demands that they be continued and I am optimistic enough to believe that the united profession will not allow their extinction but by their influence in educational matters and medical practice laws will insure their education and continuance.

THE REPORT OF A CASE OF TRUE CHYLOUS EFFUSION IN THE PERITONEAL AND PLEURAL CAVITIES WITH RECOVERY.

By HERMON C. GORDINIER, A. M., M. D.,

Professor of Medicine, Albany Medical College.

The various text books of medicine are either silent or only give the most meager description of chylous or chyliform effusions in the peritoneal, pleural or pericardial cavities. Dr. Bussey's paper, published in 1889, contained the records of thirty-three cases of chyle and chyle-like, milky, fatty or oily fluids in the peritoneal cavity.

Rotmann published in 1897 a paper on this subject and was able to collect 155 cases from the literature inclusive of his own. Of these cases 104 were confined to the peritoneal cavity, forty-nine to the pleural cavities, and two to the pericardium.

According to Rotmann, the pathological causes of the milk-like effusion in the serous sacs are: first, trauma; second, tuberculosis; third, malignant disease; fourth, filariasis; fifth, thrombosis of the left subclavian vein; sixth; diseases of the liver; seventh, syphilis. He has grouped the cases where the effusion was confined to the peritoneal cavity as follows:

Seventeen cases were due to the compression of the thoracic duct by glandular enlargement or neoplasms; nine due to non-tubercular peritonitis; six to the occlusion of the left subclavian vein; five to excessive pressure from strain or cough; five to peritoneal carcinomatosis; three to filariasis; three to occlusion of the thoracic duct; three to occlusion in lymph glands; three to occlusion of lymph vessels; two to external pressure; two to malignant lymphoma; two to disease of the liver; two to syphilis; one to angioma of the lymphatics, and one to calculus in the receptaculum chyli.

Comey and McKibben in 1903 reported a case of true chylous ascites due to chronic obliterative inflammation of the thoracic duct, and Dock in 1907 recorded a case of chylous ascites and chylous pleurisy in a case of lymphocytoma involving the thoracic duct.

L. Napoleon Boston tabulated 128 cases of chylous effusions.

Only three of Boston's cases were filarial. In eleven cases obstruction of the thoracic duct was demonstrated. In seven cases the duct or receptaculum chyli was ruptured. In the remaining cases the point of leakage was not determined.

Strauss reported a case of true chylous ascites due to the rupture of two lymphatic trunks on the anterior surface of the mesentery. In a large percentage of the cases of chylous effusions the point of the escape of the chyle is difficult or impossible to find. In some of the cases the escape may be due to a general capillary oozing from lymphatic stasis, the result of obstruction to lymphatics that are not found at autopsy. Ormerod and Sidney Martin have reported cases of chylous ascites due to backward pressure of heart lesions leading to thrombosis of the jugular and point of the left subclavian vein into which the thoracic duct opens. It is perfectly conceivable that a diffuse chronic peritonitis by compressing the smaller lymphatics may excite changes in their walls resulting in leakage from small ruptures or transudation.

Frank A. Baldwin collected forty-seven cases of true chylothorax whose ages varied from two to sixty; the etiology of these cases was as follows: traumatic, sixteen; pressure by growth of tuberculous lymph nodes on the thoracic duct, nine; secondary growths in the duct, nine; thrombosis of the left subclavian vein, four; proliferating lymphangitis, two; aneurismal dilatation of the duct, two; thrombosis of the duct, traumatic obstruction, or thrombosis after operation for carcinomatous nodes of the neck,—obstruction of the duct from inflammatory thickening of the mesentery, mitral valve disease, filariasis, each one, five; total, forty-seven.

From a study of the above reported cases it is evident that most cases of chylous ascites or chylothorax are due to the escape of chyle into the peritoneal or pleural spaces through lymph stasis, obstruction or rupture of the thoracic duct, or of large lymphatic trunks, lymph vessels, lacteals, of lymphangioma.

Rolleston, in the second edition of Albutt's *System of Medicine*, divides the fatty, milk-like or chyloform ascites into the following three types:

- (1) true chylous effusion.
- (2) the chyliform or fatty ascites,
- (3) the milky non-fatty ascites.

The distinguishing features of the fluid from cases of true chylous ascites are a specific gravity varying from 1.007 to 1.040 with an average of 1.015; alkaline reaction, rarely neutral or amphoteric; it resists putrefactive changes, is usually devoid of an odor, is sterile, does not coagulate on standing, separates into layers on standing, with a supernatant layer of cream-like fat which is readily soluble in ether, the milk-like opalescence being due to the presence of a finely emulsified fat. In most cases it presents a definite sugar reaction.

The chyliform or fatty ascites resembles closely the true chylous variety but differs from it in that the fat is in much larger globules or is contained in the interior of the degenerated cells, and that the fat is not derived from the lacteals, lymphatics, or thoracic duct. Cases have been reported of a mixed variety, a combination of the true chylous and fatty forms.

In milky, non-fatty chylous ascites, the ascitic fluid is milky and to the naked eye resembles that of the two preceding varieties. It differs, however, from the chylous in not separating into layers and microscopically contains no fat. Its milk-like color is most likely due to some albuminous substances, the result of degenerative changes in the cells suspended in it.

Dr. Edsall reported in 1905 at the meeting of the American Pediatric Society a case of Hodgkin's disease, in which there was a non-fatty, pleural effusion, the opacity being due to altered globulins.

Mr. A., an Armenian, thirty-two years of age, a collar cutter by occupation, entered the Samaritan Hospital December 9, 1917, complaining of swelling of the extremities and the abdomen, pain and soreness in the back, shortness of breath, with loss of appetite and great general weakness.

Family History: The family history is without import and negative to malignancy, tuberculosis, nervous diseases or insanity.

Personal History: He had as a child measles and pertussis, never scarlet fever or diphtheria, la grippe, or other infectious disease. Denies absolutely any venereal infection. For fifteen years he has taken freely of alcoholic stimulants.

The Present Illness began six months previously with swelling and puffi-

ness about the eyes and face and this was soon followed by swelling of the face and legs. He also noticed that he voided frequently throughout the day and two or three times at night.

Examination: The patient is tall, fairly well nourished, with pallor of the skin and mucous surfaces. He is semi-recumbent, is distinctly dyspnoeic, but has no cyanosis. His eye-lids and face are puffy and there is generalized soft edema of the lower part of the trunk and lower extremities. The abdomen is large and protuberant.

Lungs: The chest is voluminous and the note is vesiculo-tympanitic. The expiration is prolonged, especially at the bases of the upper lobes. Dullness exists posteriorly from the angles of the scapulae to the bases. Over these areas the respiratory murmur is feeble and distant and numerous fine subcrepitant râles exist.

Heart: The impulse is not visible or palpable, there is no friction thrill, or retraction, the cardiac dullness is almost effaced by a super-resonant note. There is no sub- or retro-manubrial dullness. The sounds are clear but distant. The pulmonic second sound is distinctly accentuated. No adventitious sounds are present. The action is rhythmic, rate 90. The blood pressure is 115/80 m.m., Hg.

Abdomen: The abdomen is full and tense. There are no dilated veins. A perfectly distinct fluctuation wave is present with shifting dullness in the flanks and tympany in front. No herniae or palpable tumor mass could be determined.

Liver: The liver dullness extends from the fifth rib in the mid-clavicular line to the costal border and in the mid-axillary line from the seventh rib to the costal border. Owing to the abdominal distension the lower liver border could not be palpated.

Spleen: The spleen could not be outlined by percussion or palpation. The rectal touch showed nothing abnormal. No superficial lymph nodes were palpable. The thyroid gland is not enlarged. The long bones show no changes in shape and are not tender on percussion.

The Nervous System: The neurologic examination is negative save that the optic discs are pale. The retinae are normal.

Urine: The urine is clear, light amber, aromatic, of a specific gravity of 1.026, acid, contains a distinct amount of albumen, but no sugar, pus or blood. It contains triple phosphates, epithelial cells, and a few leucocytes and many fine and coarse granular casts. A catheterized specimen contained no acid-fast bacilli. The phthalein renal insufficiency test showed sixty per cent. in two hours.

Blood Examination: The red blood cell count is 4,792,000; the white cell count is 9,160; the hemoglobin eighty per cent., Dare. Differential count: polynuclears, forty-eight per cent.; small lymphocytes, forty per cent.; large lymphocytes, eight per cent.; transitionals two per cent.; eosinophiles, two per cent. The red cells were normal in size and shape. No nucleated forms were found. The blood Wassermann reaction was

two plus. Fresh blood examined both at mid-day and mid-night showed no filariae.

January 14, 1920, the patient is unimproved. The abdomen is much distended and he is so dyspnoeic and uncomfortable that a paracentesis abdominalis was performed and two liters of an alkaline, odorless, opaque, milk-white fluid was obtained, having a specific gravity of 1.015, and which on standing showed on the surface a cream-like layer of fat. This fluid, when made strongly alkaline with sodium hydroxide and extracted with ether, became much clearer and showed a considerable amount of free fat. The centrifugalized specimen contained many fine free fat granules, mononuclear and endothelial cells and a few polynuclear neutrophils. The addition of a one per cent. solution of osmic acid to the fluid on the slide changed the color of the fat granules to a dark brown. Smears taken from the fluid showed no acid fast bacilli or filariae. The fluid reduced Fehling's solution. Culturally no organisms were grown. An interesting feature was the resistance of the fluid to decomposition. Fluid kept many weeks at ordinary room temperature showed no such tendency. January 13, 1918: The patient is unimproved. The dyspnoea is very marked. The ascites is fast recurring. Physical signs of fluid are present in both pleural spaces. Approximately a half liter of milky fluid was aspirated from each pleural space, having a specific gravity of 1.016, and possessing the identical characteristics as that from the peritoneal cavity. No acid fast bacilli or filariae were found in the pleural fluid.

ABDOMINAL PARACENTESIS

Jan.	12, 1918	2	liters
Feb.	15, "	4½	"
"	28, "	5	"
March	19, "	6½	"
"	27, "	9	"
April	5, "	9	"
"	12, "	9½	"
"	18, "	8	"
"	25, "	8	"
May	2, "	8	"
"	10, "	6½	"
"	17, "	7¼	"
"	24, "	3	"
"	31, "	7	"
June	9, "	8¾	"
<hr/>			
102 liters			

The cerebro-spinal fluid was clear, under no pressure, and showed nothing abnormal. Unfortunately a Wassermann or colloidal gold reaction was not taken.

The patient remained at the hospital from December 9, 1917, to June 9, 1918, during which period his abdomen was tapped fifteen times, with the removal of 102 liters of fluid, having the same characteristics as above described. On several occasions fresh blood was taken at midnight for microscopic study and at no time were filariae found. The urine was never milky and filariae were never discovered in it or in the chylous peritoneal fluid. When he left the hospital he had greatly improved. No physical signs of free fluid in the pleural spaces existed and apart from a slight movable dullness in the flanks no other evidences of free fluid in the peritoneal cavity were present. The edema of the face, trunk and extremities was absent, shortness of breath was only present on exertion and there was but a trace of albumen in the urine and an occasional cast found. Blood examination showed 2,850,000 r.b.c., 11,000 w.b.c., haemoglobin, 70 per cent. The blood Wassermann, doubtful reaction.

He returned to my office July 10, 1920, having in the meantime been at work in Boston for about nine months. His appearance was that of a robust, healthy, well nourished individual, without dyspnoea, cyanosis, or edema. Physical examination showed no evidences of fluid in the peritoneal, pericardial or pleural spaces. The urine passed at that time was negative to albumen, sugar, pus, or blood but showed an occasional hyaline and granular cast. His blood pressure was 120/90 m.m., Hg. Heart rhythm was regular, with the rate eighty. There were no adventitious sounds. He regarded himself as being in perfect health and said he came into my office because of my previous interest in his case.

The case herein reported was interesting because of the presence of true chylous effusion into the peritoneal and pleural spaces without the evidences of a new growth, lymph node enlargement, venous thrombi, filariae, or other clinical evidences of lymphatic obstruction, save the presence of the milk-like fatty effusions.

With the presence on several occasions of a definite blood Wassermann reaction, it is fair to assume that a syphilitic process was the probable cause of both the chylous effusions and the tubular nephritis, inasmuch as apart from rest, tonics, and frequent abdominal tapping, his cure seemed to be due to active anti-syphilitic medication.

Syphilitic changes of the thoracic duct, according to Warthin,

are exceedingly rare. Despite this fact, however, it seems probable, inasmuch as in the case here presented true chylous effusions existed in both pleural and peritoneal spaces, that such a process did exist, and that recovery was due to the relief of the pathologic change and the reestablishment of the lymph stream through the duct.

BIBLIOGRAPHY.

- ALBUTT and ROLLESTON: *System of Medicine*, 2nd ed., p. 825.
 BALDWIN, FRANK A.: *Reference Handbook of the Medical Sciences*, 3rd ed., p. 62.
 BOSTON, L. NAPOLEON: *Reference Handbook of the Medical Sciences*, 3rd ed., p. 62.
 BUSEY: *American Journal of the Medical Sciences*, XCV, p. 575, 1889.
 COMEY and MCKIBBEN: *Boston Medical and Surgical Journal*, Vol. CXIV, p. 409, 1903.
 DOCK, G.: *Transactions of the American Association of Physicians*, Vol. XX, p. 464.
 MARTIN, S.: *Transactions of the Pathological Society of London*, 1891, Vol. XLII, p. 93.
 ORMEROD: *Transactions of the Pathological Society of London*, 1868, Vol. XIX, p. 199.
 RODMAN: *Zeitschrift für Klinische Medizin*, Bd. XXX, s. 416.
 SENATOR: *Charité-Annalen*, 1885, s. 307.
 WILSON: *Transactions of the American Association of Physicians*, Vol. XX, p. 142.
 WARTHIN, OSLER and MCCREA: *System of Medicine*, Vol. IV, p. 571, 1908.

PRACTICAL SIDE OF SARATOGA SPRINGS AS A HEALTH RESORT.

Read by invitation before the meeting of the Fourth District Branch at Saratoga Springs, N. Y., September 7, 1920.

BY DOUGLAS C. MORIARTA, PHG., M. D., F. A. C. S.

Mr. President and Gentlemen:

When our President invited me to present a paper to-day, he asked that I should, to quote his letter, "give the latest information concerning the therapeutic uses of the mineral waters, and what has been done at Saratoga to apply their treatment."

It would hardly seem necessary to mention that the Saratoga mineral waters are the peer of all others of their type; nor that they are medicinal, and peculiarly so, their therapeutic value having been attested for many years by the observations of innumerable physicians, as well as by the laity. The springs of Saratoga are of the chloride type, saturated with carbonic acid gas, and all contain essentially the same chemical salts, though they vary in the amount of their mineral constituents from 200 to 1,250 grains to the gallon. The individual spring

does not show any variation in its mineral contents from time to time; for instance, if the analysis of a spring shows it to contain 1,200 grains of mineral salts in a gallon of water, that is absolutely dependable information, and is a guide for the therapeutic administration of that particular spring water.

In addition to these known elements, we have recently been informed that radium is present in our waters. In a paper many years ago before the County Society, I stated that there was some force present in the mineral waters at Saratoga that was not possessed by synthetic waters made after an authentic analysis; my thought at that time was that there might possibly be an indeterminable complex salt, or salts, present. I now firmly believe that this unexplained quality was due to the presence of radium. In 1912 Professor Moore of the School of Mines examined our spring waters and subsequently reported that some of them were radio-active while others contained radium salts. It is present only in infinitesimal quantities, in fact if reduced to figures those unacquainted with radium would at once eliminate it as a possible therapeutic factor. But in such conclusion I do not concur, and to justify my position in this regard, I beg your patience while I report a case which is pertinent in considering the effect of inappreciable quantities of radium emanation.

Mrs. B., age 45, with a spleen filling four-fifths of the abdominal cavity, a white count of 350,000, I treated with 25 milligrams of radium for 24 hours. The radium was placed on the abdominal wall in a different area every two hours. With this single application, at the end of 21 days, the white count was found to be reduced to 37,000, while the spleen was half its original size.

I want you to realize that before the emanation could reach the spleen to affect the internal metabolism, it had to pass through one and one-half inches of felt, the skin, fat, muscles, fascia, and possibly some abdominal space. Now let us estimate the quantity of emanation which would be given off from 25 mgs. of radium during this period. If the entire quantity of emanation from 25 mgs. of radium element could be collected during a period of 1,750 years (which is the life of radium) and be compressed, we would have a quantity equal in bulk to five-

eighths of a drop of water. So there was given off in the twenty-four hours, a quantity of emanation equal in bulk to one-millionth part of a drop of water. Moreover the applied radium being in a tube on a flat surface, not over one-third of its rays were effective; so that, approximately, radium emanations equal to three-millionth part of a drop of water, disseminated over the abdominal area for a period of twenty-four hours, brought about this remarkable result; and it will invariably do so. This illustration is not intended to suggest the use of the Saratoga waters in leukemia, but merely to show the great dynamic force of inconceivably small quantities of radium emanation.

For your information, and to remove so far as possible the skepticism of many of my professional brethren,—and of that class there are many, for I am continually asked if the springs are natural waters, if they are doctored, if they have a therapeutic value, and if they have really “come back,”—I beg to reiterate two facts:

First. They *are* natural waters; and

Second. The water from an individual spring never shows variation in its mineral contents. I may say, further, that the springs at Saratoga were never out; that is, they did not vary in their mineral content during the period in which they were so extensively pumped in order to extract their CO_2 contents for commercial purposes. What did happen was that the level of the water in the lime strata was lowered by pumping; and when the pumping ceased, the original water level was restored. For this statement of fact, you have the seal of the State.

When taken *internally*, our mineral waters exhibit two distinct qualities which I characterize as their immediate and remote action. The *immediate* effect is to clean out the intestinal tract and stimulate the natural secretions of the mucous glands of the intestines, liver, kidneys and gall bladder tract. Their action is aperient, cathartic, purgative, diuretic, eliminative and anti-acid, depending upon the type of water, the quantity used, and the time at which it is taken. The *remote* action is found in the correcting of perverted metabolism, of anemia, and many ill-defined morbid conditions of a more or less chronic nature.

When used *externally*, the immediate effect of the Saratoga mineral water bath is to lower the pulse rate, while the tone and character of the heart beat is improved. During the bath the body is covered with bubbles of carbonic acid gas, producing a marked tingling sensation, and the body surface takes on a glow which in many cases approaches an exanthematous appearance. The dilatation of the peripheral vessels thus induced relieves the blood supply of the internal organs, and in this manner has an effect on general metabolic conditions. In addition, the result of the bath is positively modified by the temperature of the water and the period of immersion.

The determination of the therapeutic action of these waters when used internally must of necessity be empirical. They are indicated in conditions of constipation, catarrh of the bile duct, congestion of the liver, gout, rheumatoid conditions, primary anemia, diabetes, obesity and cardio-vascular diseases, particularly arterial tension. Indeed, most sub-acute and chronic cases will be benefited by their use when a regular life is followed. To be somewhat more specific:

Constipation. Our stronger waters are most satisfactory in cleaning out the intestinal tract, acting as an aperient or drastic cathartic, which depends entirely upon the time of day and the quantity taken. The effect is immediate, producing a painless and satisfactory evacuation.

Urinary Tract. Irritation, due to hyper-acidity, is relieved by the alkaline waters; the kidneys are washed out, possibly carrying along toxins from the blood streams, while the urine is less irritating when diluted. Where there is a pathological condition of the kidney, the same care is necessary in the selection of a mineral water as in the use of other drugs. It is well to have in mind the kidney elimination before the mineral waters are prescribed. If the quantity of urine secreted in twenty-four hours is less than sixteen ounces, the patient should be put to bed and water withheld until renal activity is re-established, when the alkaline waters will be found helpful.

Functional Nervous Diseases. These are improved by a thorough cleaning out of the intestinal tract, a cool bath (eighty-five degrees) to be followed by a Scotch douche to the spine.

Cardio-vascular Diseases. These, when not decompensated, are many times relieved to an unexpected degree. Not only the heart muscle, but the character of the heart beat, is improved. This may be due to the relieving of the internal organs by the dilatation of the peripheral vessels.

Symptomatic High Blood Pressure. In arterial tension, free catharsis from the use of one of our strong mineral waters in the morning, with the addition of the alkaline waters after meals, proper exercise and a low diet, with a CO₂ bath daily at 100 degrees for 15 minutes, followed by a half-hour's rest, will accomplish wonders.

Obesity. The use of one of the strong cathartic waters before breakfast, a hot mineral bath or the electrically heated cabinet, exercise, and a diet restricted to 2,000 calories a day, will secure results that are most gratifying without producing exhaustion.

Rheumatism or Rheumatoid Conditions. These will be benefited if due to intestinal toxemia. If they are due to a focal infection of the teeth, tonsils or blood, relief should not be anticipated.

Metabolism. A general improvement is noticed, evidenced by a feeling of well-being, and a clearing of the complexion and tongue. In addition, the blood will show an increased red blood count.

While you may accept the foregoing points to be correct, I would still maintain that the benefit to be derived from a course of treatment at Saratoga is not due directly to the internal use of our waters, nor to their external use, nor to a combination of the two. Such positive betterment as is observed is due to a regulated life, which comprehends the diet, proper periods of rest and exercise, and correct personal habits together with the indicated internal and external use of the mineral waters. All are links in the chain of health-producing factors, no one of which stands out as of pre-eminent value, nor to be accredited with the general betterment, though each has its part in the result. Together they tend to restore a normal balance, and thus enable nature to carry on her complex processes.

Our President has asked for the newer uses of our waters.

There are none, unless I were to elaborate the effect of their radium contents. However, this element has always been present, and to it their unusual therapeutic value may justly be attributed. The unique and almost incomprehensible therapeutic action of radium emanation in infinitesimal doses hampers one's conception of its possibilities. I have not sufficient data at my command to impress, much less convince, you; but I do know that practically ninety per cent. of my patients show a marked increase in the number of red cells after drinking these waters, and I attribute it to their radium content, because of similar results with activated water. This fact has always been observed in anemias, but it has been attributed to their iron content; and it may be so.

There have been two innovations introduced by Commissioner Pratt to which I must take exception: to the first, because I think it is entirely wrong; and to the second, because of the manner of his doing it.

First, the serving of our most potent water, Hathorn number two, exclusively from bottles. From the time when the Indians brought Sir William Johnson on a litter through the forest to Saratoga in order that he might have the healing waters at first hand, the belief has prevailed that they were most potent when they were drunk as they flowed from the earth. The teaching of experts in the use of these waters has always been to this effect, and as a consequence, people have been coming here for years from far and near to drink the waters directly from the springs. And further, we read in the most recent brochure issued by the Conservation Commission concerning the Saratoga mineral springs (page 9),—"it is understood by our foremost clinicians that the waters of Saratoga act with special efficacy when taken internally at the springs;" and (page 18), "aside from specific effects, the free imbibition of the Saratoga water, which can be effected at the spa, when it cannot be at home, does great good," etc. Commissioner Pratt has set aside this teaching, and the waters are served from bottles for commercial reasons.

Second, the elimination of the Nauheim baths. The reasons given for doing this are three:—

A. In order that Saratoga's position shall be taken by Saratoga herself because of the merit which she possesses.

B. Because many Americans have returned from Europe "Nauheim wrecks." (MacKensie.)

C. The action of the Saratoga Springs Medical Society, which was as follows:

Order entered in the minutes of the Conservation Commission on July 23rd, 1920.

WHEREAS, The Saratoga Springs Medical Association, at a meeting held July 16, 1920, adopted a resolution expressing the sense of the Association that the addition of salines to the Saratoga natural carbonated baths is not only unnecessary, but detrimental to the best therapeutic effect of these baths,

When Commissioner Pratt says that Saratoga should take her position on her own merits, I stand unqualifiedly with him, and he should have stopped there; for Saratoga *can* stand on her own merits, because the CO_2 contained in our mineral waters exceeds that found in any other mineral water in the world. I have used our natural mineral water baths exclusively, with the happiest results, even during the period when Professor Baruch was so enthusiastically advocating their fortification by the addition of chlorides of calcium and sodium. Yet to question the merits of the Nauheim bath by innuendo, or by incompletely quoting MacKensie, is to discredit our honesty of purpose. Particularly is this so, when in the same brochure, the value of the Nauheim bath is quoted to give our own baths a standing:

Page 7: "the results at Saratoga are equal if not superior to those at Nauheim."

Page 25: "even old valvular murmurs frequently disappear entirely under treatment by the Saratoga Effervescent bath. This sounds incredible, but Schott has reported the same findings at his spa, using a somewhat similar type of bath."

As to the expression of the local medical society, their vote showed more courage than judgment. For we know that while the Nauheim bath, or the Saratoga Effervescent bath, natural or fortified, is suicidal to decompensated or terminal cases, Schott and others have proved it to be a safe and valuable remedy in properly selected cases; but we also know that it must be given by a skilled attendant.

In coming to an answer to the second query of our President, as to what Saratoga has done to apply the use of our waters, I will attempt to tell you what the State and Saratoga have done.

The State passed an enactment, creating a Reservation Commission, carrying an appropriation to buy and control the mineral water rights at Saratoga; this is now in force. To the end that these marvelous springs,—which we cannot too often remind ourselves are concededly the most remarkable group in the world,—may be available for all, attractive drink halls, bath houses, parks and their accessories, have been provided by the State. To the Saratoga and Lincoln bath houses, has been added this year the Washington baths, providing additional convenience and luxury for a constantly increasing number of patrons; and it is undoubtedly the aim of the State and the Commissioner to furnish everything that is desirable.

On her part, Saratoga has established, in the center of the city, a picturesque park, in which is the beautiful structure of Canfield fame, particularly adapted to and intended for a “Kur Haus.” The city also provides music during the season for the entertainment of the visitors.

There are two private institutions in the city for those desiring medical treatment, diet and rest. There is also a private pathological laboratory, and one very recently established by the county.

Thus it is my pleasure to inform you that there is not a single feature lacking, with European spas as a standard, to make Saratoga Springs a great health resort. And this is not all. Commissioner Pratt is planning to build a most complete bath house, with hotel adjoining, and this will permit the treatment of partial decompensated cardio-vascular cases without the pernicious effort involved at present.

To this extent Saratoga has “come back.” But she has not fully come into her own, nor will she do so, until the errors of omission and commission of the allied interests,—and by this I mean the State, the city and the physicians,—are corrected, and our resources made to conform to the material requirements of the invalid. At present we seem to think it is enough to have these *possibilities here, without working together to make them efficient*. To do this successfully, it must be realized that a health

resort is primarily a place where invalids go to be restored to health, and that care, and attention to their wants, *must* be paramount. The ramifications of these two things lie in all directions. Now, the State's Commissioner unquestionably believes that the development of his ideas will eventuate in the building of a permanent health resort; his mistake, if he is making one, is in confounding luxury with real betterment, and numbers with efficiency. It is needless to say that the invalid will accept luxury if he can have it; but his object in going to a health resort, as I have said, is to regain his health; to that end, comfort, care, and consideration, are essential, and if they are not to be found here, will be sought elsewhere.

The fault of lack of unity of procedure is not all with our Commissioner, by any means. Our citizens think they want a health resort, and during the winter months they actually believe it. They have spent many thousands of dollars towards that end, and are annually spending \$65,000 to continue their delusion. Yet I do not know of a single effective effort that is being made. The elegant building, so wonderfully adapted for a "Kur Haus" is actually rusting out, instead of being put to some practical use along this line.

Then the diet proposition, the regulation of which is an absolute necessity for the invalid, is not even considered. There is not a hotel manager in the city who would dare direct his chef to prepare special food for invalids. The city should recognize that it is her duty to help correct this condition and take positive and definite steps to that end and stand behind any effort which might be made by others.

When we consider the bathing situation, we find that the care which is so essential to the invalid in hydrotherapy is absolutely nil; this you can easily imagine when I tell you that at one of our bath houses six attendants give 300 baths between the hours 9-3. If we compare the relative value of the internal and external use of our mineral waters, it will be ten to one in favor of the internal use. Yet even at this ratio, their external use would be of inestimable value if our bath houses were intelligently and scientifically conducted. If one of our present bath houses

could be given over entirely to the treatment of the invalid, completely and practically equipped for that purpose, and with a sufficient number of competent bath men constantly in attendance, where scientific hydrotherapy and balneology could be carried on, this with the facilities for obtaining proper diet arranged, would bring us very near to our objective.

So, as a health resort, we are not efficient, because we are not clinically co-ordinated; for with the exception of one small institution, owned by ten of our local physicians, it is not possible for an invalid to be cared for scientifically. This institution is apparently ahead of the times, as its capacity is never taxed, and, so far as I know, it has not even had the commendation of the Conservation Commissioner.

Consequently, while an occasional invalid does come to Saratoga, he does not stay long; he moves too slowly and requires too much attention to be either welcome or benefited, and he is practically crowded out by the 999 who come in a popular or non-professional way to drink the waters and take the baths under the present methods during their vacation period. I would not have you think that I advocate denying this latter class of patrons the benefits which they may derive from a sojourn at Saratoga Springs, or wish to intimate that they are not welcome, —for I do not. But I do deprecate the total lack of interest, not to say indifference, displayed by our physicians, our city authorities and the State, toward making Saratoga attractive to the invalid public, and making it possible for them to derive the benefits which nature has here so abundantly provided. For these really are the ones in whom the Legislature was chiefly interested, when the law for the preservation of our springs was enacted. The fact that we have the most wonderful spring water in the world does not offset poor organization; neither is it necessary to have the most luxurious bath houses in the world in order to have efficient treatment. In every direction we are sacrificing the permanent up-building of a great health resort to the immediate present. The State authorities are apparently blind to the benefits to be derived by an invalid from scientific care, while using our waters; and further, they do not seem to take into consideration the fact that an invalid restored to health

is the best possible advertisement, and that such patrons would prove a substantial nucleus for the future revenues of the State, while the city is equally blind and foolish in its expenditure of money without an adequate return along lines which mean our future prosperity as a health resort. Our present course spells certain disaster.

Senator Harding was recently asked what he thought of the Tariff Commission, and he replied that he could not tell for it was not functioning. I have stated our short-comings as a health resort frankly, first, because I believe you should not be misled when sending your patients to Saratoga for their health, and second, you should know the reason why, if perchance one of your patients should have come to Saratoga for treatment and returned home disappointed and dissatisfied, as I find this a common occurrence in my practice; and third, in the hope that your discussion will stimulate action, which may lead to an improvement of the situation at Saratoga Springs.

Before closing at the risk of repetition I will venture to call attention to a few points for those of you who may make use of our mineral waters as a therapeutic measure, either when advising your patients yourself before they come here, or if sending them to a local physician.

First. Our mineral waters possess qualities and produce results not common to similar alkaline or saline salts when synthetically combined.

Second. While their indication is empirical, their therapeutic use presupposes a diagnosis and a clinical knowledge of their action.

Third. They do not possess a marvelous power, neither are they a specific for any disease unless possibly intestinal stasis or constipation. They should not be thought of as a last-resort measure, nor of value in terminal conditions.

Fourth. Contrary to a very common belief there is not a particular spring water which will relieve a specific condition: that is, there is not one water for diabetes, another for insomnia, another for rheumatism, etc.

Fifth. Patients should be advised against the indiscriminate

and promiscuous drinking of these waters. This is more essential than is commonly thought, for many patients enjoy them and drink them to excess.

Sixth. The only contra-indication for their use is when chloride of sodium is not permissible.

Seventh. Many persons seem to think that there is a diet peculiar to the Saratoga mineral waters which should be followed when taking the cure. The truth is that the diet is peculiar to the patient, or at least to his morbidity, and is always a personal equation. It would hardly seem necessary to make this statement before a body of physicians; yet I recently heard a local physician inquire of an essayist as to the diet he would suggest in connection with the use of our waters!

SYPHILIS AS AN ETIOLOGICAL FACTOR IN TRIGEMINAL NEURALGIA.

By HENRY VIETS, M. D.

Syphilis is rarely mentioned in the literature as a cause of trigeminal neuralgia. So far as can be ascertained only one case is reported and this very briefly. Browning and McKenzie (1) in reviewing their experiences in 1911 with three hundred cases of syphilis treated by salvarsan write as follows: "One case of severe trigeminal neuralgia in a woman who had never had any symptoms of syphilis, but whose serum gave a positive reaction, was cured after an intramuscular injection of 0.5 grams in clear alkaline solution." Such a casual reference is perhaps hardly worth noting except for the fact that it is the only one found regarding this point.

In contradistinction to the typical paroxysmal tic douloureux of Fothergill there are many forms of pain in the face that may be due to syphilis. In fact Fothergill (2) in his original description of the disease suggests that "some painful affections of the head, which sometimes extend to the face arise from ancient venereal complaints imperfectly cured." Jelliffe and White (3) think that syphilis may be accompanied by neuralgia but make

no specific mention of neuralgia of the trigeminal area either in its complete or partial form. Oppenheim, Head or Taylor do not mention syphilis as a cause of trigeminal neuralgia but Nonne (4) states that the trigeminal nerve is "especially often affected in the form of an isolated and simple neuralgia." He gives no illustrative cases or references to the literature to support this view and so far as I know he is at variance with all other writers on the subject.

Pain in the face as an accompaniment of other symptoms and signs is, of course, common in neurosyphilis. Mott (5) gives an excellent case of a young woman with severe headache, cachexia, hyperaesthesia and pain of the fifth area, double optic neuritis and stiff neck. Under treatment with mercury and iodide the symptoms disappeared in a few weeks and she was discharged practically well. Mott's case was before the days of salvarsan therapy. A modern case is cited by Southard and Solomon (6). A woman with vague pains and partial anesthesia of both trigeminal areas, but more especially on the left, was proven to have neurosyphilis. She also had a partial paralysis of the motor fifth. At autopsy there was a gross inflammatory lesion of the left fifth nerve, localized entirely to this nerve. Microscopically the nerve showed a diffuse infiltration with mononuclear cells and perivascular infiltration. The authors call special attention to the exquisite focality of the syphilitic process pathologically and illustrate the paper by convincing photomicrographs.

Anesthesia, paralysis and loss of the corneal reflex are more common in neurosyphilis than irritative lesions giving neuralgia of the trigeminal area or lesions producing the symptoms of *tic douloureux*. I have recently seen a case of complete anesthesia of the second branch without other signs, accompanied by a positive blood and spinal fluid. On the other hand, I have not seen or read of a case of neurosyphilis exhibiting the symptoms of *tic douloureux* alone without visible signs at least suggestive of an involvement of the nervous system. The following case illustrates this condition.

Mr. T., age 33, an insurance agent of more than average ability, was first seen in March, 1920. He complained of paroxysmal pain in the left

side of the face of nine years' duration. The pain in a typical attack was knife-like, began below the eye, and spread to the nose, upper lip and the supraorbital region. The attacks came on suddenly, during the day or night, and lasted from a few minutes to one-half an hour. He found relief in pressure of the hand over the area and walking about the room or rocking in a chair. Eating, talking or sitting in a draft sometimes brought on the attacks but they usually came without warning. After an attack there was often some soreness of the face and a slight, dull, aching discomfort. At the height of an attack there were increased salivation, nasal secretion and lacrymation. I witnessed a number of attacks and felt that they were typical of tic douloureux with the possible exception that eating, talking or touching the face did not usually produce them. These attacks had been nearly continuous for nine years, sometimes as frequent as three a day but at other times lapsing for a month or two.

Mr. T. had sought various medical opinions. His teeth had been X-rayed and later removed on the left side. Examinations of the eyes, nose, throat and sinuses were negative. He was advised to have an operation but refused. In March, 1919, he had an alcohol injection of the second branch and was free from pain for six months. The renewal of the attacks with increasing severity made him seek further relief, by operation if necessary.

The physical examination was practically negative. The pupils were equal, reacted promptly to light and accommodation, but the left pupil was slightly irregular. The fundi showed no abnormalities. Extraocular movements were normal. There was no corneal anesthesia or anesthesia of the fifth area. The motor fifth showed no paralysis. Other cranial nerves were normal. Knee-jerks and ankle-jerks were equal and active. No clonus, Babinski, Romberg or ataxia were present. The chest and abdomen were negative. Blood pressure, 132/98. Urine: 1020, no albumin or sugar.

Operation was considered, but fortunately was delayed until further tests were reported. The blood Wassermann was strongly positive. The spinal fluid was clear and colorless, contained sixty-two cells per c. m., with an increase of protein and a strongly positive Wassermann reaction.

In view of these findings he was given eight intravenous injections of neo-arsaminol in a period of forty days, a total of 4.1 grams in all. After the second injection the attacks diminished greatly in severity, and after the fourth no more appeared. Six months have passed since that time without a return of any symptoms.

After the diagnosis was definitely made a history of primary syphilis eleven years before was elicited, although it was denied before. The treatment at that time had been purely local leaving an "ancient venereal complaint imperfectly cured."

The symptoms before treatment were nearly typical of tic douloureux. In reviewing the case it will be noted, however, that there was some complaint of pain and discomfort between attacks, that the onset was not quite typical, that the patient's age was certainly younger than the average for this disease and that the pain was often supra-orbital, not the usual site for tic douloureux. Otherwise, the symptoms were typical and the diagnosis of trigeminal neuralgia could certainly reasonably be made. It is to be noted, nevertheless, that operation should never have been advised without the blood and spinal fluid examinations. The omission of these procedures cost the patient years of suffering.

That neurosyphilis is the etiological factor, there can be little doubt. The prompt recovery under treatment is certainly very strong evidence for it and I find it difficult to make two diagnoses to cover the case. It must be considered as neurosyphilis and it seems to me very unlikely that tic douloureux can be of any other etiology, proceeding *pari passu* with the syphilis.

BIBLIOGRAPHY

1. BROWNING AND MCKENZIE: *Brit. Med. Jour.* 1911, II, 654.
2. FOTHERGILL: "A Painful Affection of the Face." Works of John Fothergill, by J. C. Lettsom. London, 1784: page 329.
3. JELLIFFE AND WHITE: *Diseases of the Nervous System.* Phila., 1917.
4. NONNE-BALL: *Syphilis and the Nervous System.* Phila., 1913.
5. MOTT: System of Syphilis, by D'Arcy Power and Murphy. London, 1910, Vol. IV, p. 57.
6. SOUTHARD AND SOLOMON: *Neurosyphilis.* Boston, 1917. Page 50.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.
BUREAU OF VITAL STATISTICS.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

DEATHS FOR THE MONTH OF AUGUST, 1920.

Consumption	10	Apoplexy	4
Typhoid Fever	1	Cancer	14
Whooping Cough	2	Accidents and Violence	7
Diarrheal Diseases	7	Deaths under 1 year	13
Pneumonia	1	Deaths under 70 years	32
Broncho Pneumonia	2	Death rate	13.20
Bright's Disease	11	Death rate less non-resident	10.45

Deaths in Institutions.

	Non- Res.	Res.		Non- Res.	Res.
Albany Hospital	12	11	Sacred Heart Convent ..	0	1
County House	1	3	St. Margaret's Home ..	0	1
Dominica Convent	0	1	St. Peter's Hospital ...	2	6
Home for the Friendless	1	0	Maternity Hospital	0	5
Homeopathic Hospital ..	3	4	Albany Hospital Camp .	1	1
Hospital for Incurables .	0	2	Pine Hills Sanitarium .	0	1
Little Sister of the Poor	0	4			
Public Places	1	0	Births		194
			Still Births		8

DIVISION OF COMMUNICABLE DISEASES.

Typhoid Fever	11	Tuberculosis	16
Scarlet Fever	2	Mumps	0
Diphtheria and Croup	18	Pneumonia	7
Chickenpox	3	Influenza	0
Smallpox	0	Puerperal Septicaemia	1
Measles	30	Encophalitis Lethargica	1
German Measles	1		
Whooping-cough	31	Total	121
Number of days quarantine for scarlet fever:			
Longest.....	30	Shortest.....	30
Average.....		Average.....	30
Number of days quarantine for diphtheria:			
Longest.....	96	Shortest.....	10
Average.....		Average.....	53
Fumigations:			
Rooms.....	59	Buildings.....	26
Milk bottles disinfected.....			128

MISCELLANEOUS.

Cards posted for communi- cable disease	16	Number of employment cer- tificates issued.....	21
Cards removed	22	Vacation certificates	9
Notices served on schools ..	94	Taking specimens of blood for Wassermanns	2
Notices served on stores and factories	7	Taking smears for Gono- cocci	1
Postal card returns sent to doctors	16	Postal cards sent to milk dealers	35
Postal card returns received from doctors	22	Dogs examined for rabies ..	2
Inspections and reinspections	58	Dogs re-examined for rabies	2
Vaccinations	36	Cats examined for rabies ..	1
Vaccination dressings	25	Cats re-examined for rabies	1
Children examined for em- ployment certificates	17		

Tuberculosis.

Living cases on record August 1, 1920.....		780
Cases reported:		
By Card	16	
Dead Cases by Certificate	6	22
		<hr/>
		802
Dead Cases previously reported	4	
Dead Cases not previously reported	6	
Removed	7	
Died out of town	3	
Recovered	0	
Unaccounted for	0	20
		<hr/>
Living cases on record September 1, 1920.....		780
Total Tuberculosis Death Certificates		10
Non-resident deaths:		
Albany Hospital Camp	1	
C. F. L. Pavilion	0	
County Hospital	0	
St. Margaret's House	0	
City at large	0	
St. Peter's Hospital	1	2
		<hr/>
Resident deaths		8
Visits to cases of tuberculosis		54
Miscellaneous visits		22
Visits to physicians		18

LABORATORY REPORT.

Diphtheria.

Initial Positive	117	Unsatisfactory	56
Initial Negative	810		
Release Positive	76	Total	1,374
Release Negative	315		

Sputum for Tuberculosis.

Positive	44	Unsatisfactory	1
Negative	181		
		Total	226

Widals

Positive	11	Unsatisfactory	8
Negative	27		
		Total	46

Wassermann tests	270	Gonorrhoeal Examinations ..	88
(positive 38)		(positive 25)	
Milk Analyses	94	Miscellaneous examinations ..	6
Water Analyses	3		
Pathological Examinations ..	0	Total Examinations	2,107

HEALTH PHYSICIANS' REPORT.

Cases assigned	30	Calls made	54
----------------------	----	------------------	----

DIVISION OF SANITATION.

Complaints	87	Reinspections	95
Inspections	116	Plumbing	13
Plumbing	18	Sanitary	82
Sanitary	98		
Garbage collected from 1st.		Garbage collected from 3rd.	
District	490	District	570
Garbage collected from 2nd.			
District	400		

HEARINGS.

Hearings	4	Cases heard	4
----------------	---	-------------------	---

Class of Cases.

Smoke	1	Filthy premises	3
-------------	---	-----------------------	---

Disposition of Cases

Reinspection	4
--------------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	100	Smoke	0
Old Houses	62	Blue or red	0
New Houses	38	Peppermint	1
Permits issued	56	Water test	18
Plumbing	55	Houses examined	27
Building	1	Re-examined	66
Plans submitted	3	Valid	13
Old buildings	1	Without cause	14
New buildings	2	Violations	0
Houses tested	19		

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	12	Cats removed	49
Dogs removed	18		
		Total	79
		Cases eggs removed	116

DIVISION OF MARKETS AND MILK.

Public market inspections ..	6	Milk cans condemned	0
Market inspections	28	Lactometer readings	219
Fish market inspections	1	Temperature readings	219
Fish peddler inspections	0	Fat tests	18
Slaughter house inspections	0	Sediment tests	54
Rendering establishment in-		Chemical tests	0
spections	0	Cows examined	826
Pork packing house inspec-		Cows quarantined	2
tions	0	Cows removed	7
Hide house inspections	0	Complaints investigated	0
Milk depots inspections	31	Milk Houses inspected	77
Stores inspected	39	Pork condemned .....lbs.	335
Dairies inspected	77	Violations	2
Milk cans inspected	374		

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—STATISTICS FOR SEPTEMBER, 1920.—Number of new cases, 240; classified economically: free, 111; bed cases, 21; prenatal, 8; dispensary soc. service, 23; tuberculosis, (pos.), 10; tuberculosis (Super.), 5; Hospital Social service, 7; Venereal social, 37; paid 129; limited means—bed cases, 78; metropolitan bed cases, 36; metropolitan prenatal, 14; industrial bed cases, 0; industrial social cases, 1; Western Union, 0. Cases carried over from last month, 612; bed cases, 76; prenatal cases 30; dispensary social service, 2; tuberculosis, (total), 352; hospital social service, 50; venereal, 102, industrial, 0; Western Union, 0. Classification of bed cases: Medical, 74; surgical, 5; obstetrical, 39; prenatal, 22; confinements, 35; maternity, 6; miscarriages, 2; number of babies born, 39.

Visits for Nurses (all departments), 1,552; For bed care, 901; prenatal instruction, 40; tuberculosis (sup. and inst.), 102; venereal diseases instr., 86; hospital social service, 66; general social service, 94; for other purposes, 166; dispensary social, 23; supervision, 74.

Source of Nursing Cases.—Metropolitan agents, 30; doctors, 97; nurses, 4; dispensary, 4; family or friends, 9; other sources, 13.

Disposition of Bed Cases.—Discharged recovered, 36; discharged improved, 72; discharged unimproved, 21; discharged dead, 6; discharged to other care, 24; carried, 92. Disposition of other cases: Prenatal—discharged to maternity care, 18; discharged to hospital, 0; discharged to other care, 3; carried, 26. Dispensary social service—discharged to dispensary care, 23; carried, 2. Hospital social service—Discharged home, 6; discharged dead, 1; discharged to dispensary, 0; discharged to Pavilion "F." 0; discharged lost (out of town), 1; discharged home of incurables,

1; carried, 48. Venereal—Discharged cured, 0; discharged temporarily, 3; discharged to other care, 7; carried by dispensary, 38; carried under supervision, 64; carried under care at the House of Good Shepherd, 27. Tuberculosis—Discharged dead, 8; discharged left town, 0; discharged not T. B., 0; carried (positive), 317; carried (supervision), 50. Industrial—Discharged (social or bed cases), 0; carried, 0. Total number of cases carried over into October, 572.

South End Dispensary Report.—Number of clinics, 85; surgical, 9; medical, 7; gyneological, 5; prenatal, 3; eye and ear, 15; venereal, 11; nerve, 4; nose and throat, 6; skin, 4; children, 6; lung, 0; children's lungs (observation clinic), 2; clinics with doctor attending, 72; clinics without doctor attending, 13; number of new patients treated, 117; number of old patients treated, 304; total number of patients, 421.

Industrial Dispensary, at Huyck's Mills.—Number of clinics held, 23; number of new cases treated, 29; number of old cases treated, 171; total number treated, 200; number of physical examinations, 20.

No industrial cases are really discharged, but we do not add them on to our cases carried nor do we add on the South End Dispensary Cases as carried on our General Report. They are kept separate.

A YEAR OF RED CROSS WORK.—More than fifteen thousand American communities were touched by the activities of the American Red Cross during the year ending June 30, 1920, according to the annual report of the organization covering that period.

During the year a Red Cross department of health service has been organized; its nursing service has been extended to meet a growing demand for public health nursing until over 36,000 nurses are now on its rolls; its first aid to injured courses have been widely taught, 6,000 persons having been awarded first aid certificates during the year; and the American Red Cross has been the chief factor in the formation of the League of Red Cross Societies with headquarters in Geneva.

The department of health service was established December 1, 1919. On June 30, 1920, there were in active operation 128 health centers, from which radiate innumerable activities designed to improve the health of the community, while 435 Red Cross chapters were actively engaged in disease—preventive work.

The bureau of first aid to injured was transferred from the department of military relief to the health department January 1, 1920. In addition to the 6,000 certificates issued to those who had taken regular courses, 465 medals have been awarded, ten first aid contests have taken place in various states, 1,500 medallions have been distributed and 775 junior members have been awarded emblems.

The life-saving, or water first-aid service has been extended the past year by the addition of twenty-nine Red Cross life-saving corps and the

enrollment of 1,500 new members, of whom 503 are women. There is now a complete woman's corps in this branch of the service.

The health department also includes a bureau of medical social service, which had under its supervision June 30, 1920, 312 Red Cross employees, serving 52 public health hospitals. Of this number 125 are hospital social workers, and during the year, 30,422 patients have received from this bureau some form of Red Cross service.

In the department of nursing the fiscal year was one of transition from military to civil activities. As the Red Cross has assigned 20,000 graduate nurses to war service, the department of nursing felt responsible for their proper return to civilian life, and to this end has conducted a bureau of information which has aided in placing at least 2,500 of those who have sought its aid. In this connection, also, the Red Cross appropriated \$16,000 for the establishment of a convalescent home for sick nurses.

Of the 604 nurses attached to the various American Red Cross commissions in Europe when the armistice was signed, all but 116 had returned to the United States by June 30, 1920. Of these 66 were in Poland, 46 in the Balkans, 2 in France, and 2 in Bohemia. Six scholarships to prepare nurses for foreign service have been established at King's College.

Enrollment in the Red Cross nursing service increased during the year from 35,426 to 36,705. On June 30 there were in active service 504 in the army, 321 in the navy and 943 in the public health corps.

In order to increase the number of qualified public health nurses, for which there is urgent demand, 288 scholarships have been established and 67 loans have been made from national fund to public health nursing. In addition approximately 250 scholarships have been awarded by the various chapters, the Metropolitan Chapter of Boston alone appropriating a fund sufficient for 60, while the New York County Chapter appropriated \$20,000 toward the preparation of public health nurses at the Henry Street Settlement. Funds have also been given to the University of Minnesota, Peabody College, Tulane University, University of Louisville, and University of California.

Development in class instruction in home hygiene and care of the sick has increased three-fold during the fiscal year, the number having increased from 34,033 to 93,093. During June 1920, 2,090 nurse instructors were conducting classes in this branch of work.

Activities of the bureau of nutrition service include the maintenance of a reserve of home economics women qualified and ready to serve in the event of war, and the promotion of the course of instruction in food selection, nutrition classes for undernourished children and the hot school lunch. During the year 2,387 enrolled in this service, 509 as hospital dietitians, and 1,878 as instructors. During the fiscal year a text-book

upon this line of work has been issued and 1,486 students have been certified.

During the year the Red Cross has also co-operated closely with other national organizations to recruit student nurses for public health work, so vital is the demand.

The expenses of the nursing service for the fiscal year amounted to \$129,965.92, a reduction of \$48,371.29 over the previous year.

One of the important results of the work done by the Red Cross health and nursing departments has been that 35 States have practically adopted a uniform method of working in connection with the Red Cross, whereby a bureau of public health nursing has been instituted under the direction of the State public health officer.

The part which the American Red Cross took in the organization of the League of Red Cross Societies was purely educational; but in this way it blazed the trail for the league, which aims to extend the distress preventive and constructive brotherhood throughout the world. At the first conference held in Geneva, at which representatives were present from 28 countries, it was decided to adopt the methods which have been worked out by the American Red Cross as the plan to be followed by all.

AN ALL-AMERICAN HEALTH CONFERENCE.—The first of a series of regional health conferences authorized by the International Health Conference in Cannes is to be held in Washington, December 6-13. It will be devoted to a consideration of venereal diseases.

The conference is being organized under the joint auspices of the U. S. Interdepartmental Social Hygiene Board, the U. S. Public Health Service, the American Red Cross and the American Social Hygiene Association. Prof. William H. Welch of Johns Hopkins has consented to serve as president, and already assurances have been received that some of the foremost physicians and sociologists will participate.

The conference will review past experiences and existing knowledge as to the causes, treatment and prevention of venereal diseases, and will formulate recommendations relating to a practicable three-year program for each of the North and South American countries participating. In addition it will make suggestions for putting such programs into effect.

In speaking of the proposed conference, Surgeon General Hugh S. Cumming, of the U. S. Public Health Service, said, "The United States is in the front rank of the countries which have organized against the Great Red Plague, and a consideration of the various measures which have proved of value in different communities will undoubtedly contribute much to further progress in the countries represented at the conference. More than any other important communicable disease, the spread of the Great Red Plague is inextricably bound up in a mass of

social, economic, educational and recreational problems. The success thus far attending the campaign against the venereal diseases is due largely to the fact that this interrelation has been recognized and that the campaign has enlisted the cooperation not only of physicians and sanitarians, but of sociologists, judges, probation officers, educators, the clergy and good citizens generally."

PERSONAL.—DR. JOHN A. McELWAIN (A. M. C. '11), formerly of Ballston Lake, is now practicing in Schenectady, with office at 821 State street.

—DR. FRED D. WILSON (A. M. C. '14), having returned from military service, has resumed practice at Fleischmanns, N. Y.

In Memoriam

FRANK BEEBE, M. D.

Stricken with pneumonia a short time after he had arrived in Eau-Claire, Wis., to spend a short vacation with his son and daughter, Dr. Frank Beebe, aged sixty-five years, one of Johnstown's best known and most prominent physicians, and a former mayor of the city, died July 9th, 1920, at the home of his daughter, Mrs. Pardy Cady.

Having apparently recovered completely from a severe attack of pneumonia in March of this year, Dr. Beebe decided to take a short rest and visit his son, Dr. George Beebe, and daughter, Mrs. Cady, in Eau Claire. He arrived there on Friday, July 2, and that same night he was taken with a severe chill which developed shortly after into pneumonia.

Born in Fonda, August 4, 1854, the son of Mr. and Mrs. Thomas M. Beebe, he was in his sixty-sixth year. He received his early education in the schools of Fonda and Fultonville, where his father was a teacher for many years. For a time he was employed in a drug store opened by his father a short time after the latter had given up teaching.

Being fond of arduous work and in quest of adventure, Dr. Beebe while still a youth went to New York and worked as a stevedore for a few years for former Congressman John H. Starin, who owned and operated a fleet of tug boats. Besides gaining for himself a vigorous and robust constitution this period in New York furnished him with numerous interesting experiences and humorous anecdotes which he loved to relate and which never failed to prove fascinating to his hearers.

Upon his return to this section he taught school at Ephratah, studied medicine during spare hours and later worked his own way through the Albany Medical college from which he was graduated in March, 1881. For forty years, ever since his graduation from the medical college with the exception of a few months, Dr. Beebe skillfully practised his profession in Johnstown. He won for himself a wide practise and especially in the rural district where his services were in great demand. He was a man of

generous and philanthropic nature and responded to the most distant calls regardless of whether or not he would be remunerated.

A lifelong Democrat in politics, Dr. Beebe took an active part in local public life. In a close election, Dr. Beebe was elected mayor of Johnstown in 1907, winning over his Republican rival, William T. Dovey, by only six votes. During the succeeding two years he fulfilled the duties of that office in a highly efficient and creditable manner. In 1889 and 1890 he was a candidate for member of assembly and in 1902 was a candidate for Congressman from his district, which at that time comprised Fulton, Hamilton, Schenectady and St. Lawrence counties. Having been affiliated with the city's public activities for many years, he always took a deep and devoted interest in its welfare.

His personal characteristics were marked by a warm hearted generous nature, a genial, good natured disposition and a constant optimism. He was sincerely liked by all who knew him and the city has sustained a grievous loss in his death.

Dr. Beebe's first wife was Laura Smith of Ephratah, and his second wife, whose death occurred October 19, 1919, was Cora E. Proper of Northville.

He was a member of St. Patrick's lodge, 4 F. & A. M., Johnstown chapter 78, R. A. M. and the Lotus club.

The surviving relatives are one son, Dr. George Beebe (A. M. C.), one daughter, Mrs. Pardy Cady, both of Eau Claire, Wis., one adopted daughter, Mrs. John D. Henry of Gloversville, and his mother-in-law, Mrs. Harriet M. Proper of this city, who has maintained the family home since her daughter's death.

The esteem in which Dr. Beebe was held by his neighbors is indicated in the following comment, extracted from the *Morning Herald* of Johnstown, N. Y.

The announcement of the death of Dr. Frank Beebe, former mayor of Johnstown and for many years prominent in the professional and political life of Johnstown and vicinity, brings sincere sorrow to the hearts of an unusually large number of friends and acquaintances. Dr. Beebe's life had been practically passed in this immediate vicinity, either in the counties of Montgomery or Fulton and it could almost be safely said that at one time or another every resident within the borders of these counties knew him and were his friends.

Dr. Beebe was delayed in assuming his stride in life—he was stevedore for a time on the fleet of vessels operated by the late John Henry Starin, then foremost resident and citizen of Montgomery county—the doctor being a native of that county. It was in this employment that he gained his means to carry out the work that he had long since decided he would enjoy. He taught district school and then went to medical college and fitted himself for his profession. Later he located in Johnstown and there

is no physician in this vicinity who has achieved greater success in the practice of his profession than did Dr. Beebe. He never spared himself and although of a naturally rugged constitution it became evident last winter when he fell victim to a treacherous disease that he had paid the penalty of untiring loyalty to his chosen profession, not to mention his legion of friends throughout the vicinity, and especially in the country districts, who had never known him to fail to respond promptly as possible to their call for aid and succor. It can be truthfully said of Dr. Beebe that he gave his all to the profession of his choice and love; his own life was as nothing compared to the lives of the men and women and the boys and girls that sought his help.

In politics Dr. Beebe was a Democrat—one of the Jeffersonian type: firm as Gibraltar, consistent and true to the principles he believed in, but not hide-bound or narrow. He was one of the few Democratic mayors Johnstown has had and he was a good one. Politics were laid aside during his occupancy of the mayor's chair and he was the citizen of all people. Dr. Beebe leaves a rich heritage to those of his immediate family in his remarkable helpful life. He had served his fellow citizens, he had responded cheerfully and willingly to those who required his professional services in city and country and he had proved true to the requirements of his wonderfully helpful profession. He was always a man, politically or professionally, and he lived the part to the very end—just as he would have desired.

FRED B. CASEY, M. D.

Dr. FRED BELLINGER CASEY, a graduate in the Class of 1891 of the Albany Medical College, died at his home in Mohawk, N. Y., on May 18, 1920, from hemorrhage of the stomach.

Dr. Casey was a native and life long resident of Mohawk. He was the son of the late Dr. James E. and Mary Bellinger Casey. Born November 18, 1866 he was in the 54th year of his age. He secured his early education in the Mohawk schools and in turn graduated from Cornell University and the Albany Medical College. After a post-graduate course in the College of Physicians and Surgeons of New York City, he entered upon the practice of his profession with his father to whose practice he succeeded after his father's death. He gained a wide repute and practice which he continued until the last few years which he had devoted to large holdings of real estate which he owned in Mohawk and the town of German Flatts.

In politics Dr. Casey was a Democrat but never sought preferment from his party. He was active in civic affairs and his community honored his integrity with the village trustee and treasurership. He was one of the first members of the Mohawk Municipal Commission, serving for several years and as its president, when this body took over the

water, light, sewer, police and fire departments and helped lay the groundwork for the present splendid condition in which these departments are to-day administered, since removed from village politics. When the Weller Library and park came to Mohawk, the gift of the late Frederick U. Weller, a commission was created for their management. Dr. Casey was one of the first commissioners and was active in getting the library into use and held position on the library commission at the time of his death. He had also served as village health officer.

Dr. Casey was held in the highest esteem by all who knew him and his removal is a distinct loss to his community. He was a member of the Herkimer County Medical Society and the Phi Sigma Kappa Fraternity of Albany. June 24, 1896, he was united in marriage to May, daughter of Mrs. Mary and the late Henry M. Bellinger of Mohawk, and she survives as do three children, Miss Marion M., James V. S., and Alfred B. Casey. There also survives a brother, Attorney James I. Casey of Utica. A son, Edward P. Casey, died suddenly two years ago.

JOHN HENRY COTTER, M. D.

Dr. JOHN HENRY COTTER, of the Class of 1894 of the Albany Medical College, died of heart disease in Brooklyn, N. Y., on September 15, 1920.

Dr. Cotter was fifty-two years old. After graduation from the Medical College he begun practice in Pine Plains, Dutchess County, N. Y., and remained there until 1905, when he removed to Brooklyn and continued in general practice, with some attention to minor surgery, until the time of his death. He was a member of the Medical societies of the County of Kings and Dutchess, and was affiliated with the Loyola Council of the Knights of Columbus. In 1896 he married Miss Elizabeth C. Lasher.

DOUW LANSING VAN DERZEE, M. D.

Dr. DOUW LANSING VAN DERZEE, who graduated from the Albany Medical College with the Class of 1898, died suddenly in his office while on duty as physician at the Clinton Prison, Dannemora, N. Y., on September 16, 1920.

Dr. Van Derzee was forty-eight years of age. He received his preliminary education in the Albany High School, and after graduating from the Medical College held several positions in institutions. He was at one time at the Elmira Reformatory, later at the State Industrial School in Rochester, and the Women's Relief Corps Home at Oxford. His last appointment took him to Dannemora, where he has faithfully served the State and the prisoners under his care. He leaves his widow and one son. He was a mason and was affiliated with the lodge at Plattsburgh, N. Y.

NEW YORK STATE MEDICAL LIBRARY

Edited by Frances K. Ray.

RECENT ACCESSIONS.

- American association of obstetricians and gynecologists. Transactions, v. 32, 1919.
- American medico-psychological association. Proceedings. 75th session, 1919.
- Brown, Goodwin. Scientific nutrition simplified. 4th ed. 1908.
- Bulkley, L. D. Syphilis in the innocent. 1894.
- Burton-Opitz, Russell. Textbook of physiology. 1920.
- Classification of diseases as adopted by the Massachusetts general hospital, Boston city hospital, Carney hospital, Peter Bent Brigham hospital, and others. 4th ed. 1920.
- Elliot, Gabrielle. Florence Nightingale tableaux. 1920.
- Feldman, W. M. Principles of ante-natal and post-natal child physiology, pure and applied. 1920.
- French, Cecil. Surgical diseases and surgery of the dog. 1906.
- Freud, S. General introduction to psychoanalysis. 1920.
- Harding, Gertrude. Higher aspects of nursing. 1919.
- Hare, H. A. Symptoms in the diagnosis of diseases. 8th ed. 1920.
- International conference of women physicians. Proceedings. 1920.
- Kelly, H. A. & Burrage, W. L. American medical biographies. 1920.
- Lagrange, Fernard. Physiology of bodily exercise. 1915.
- Lloyd, L. Lice and their menace to man. 1919.
- Mann, W. L. & Folsom, S. A. Foot care and shoe fitting. 1920.
- Marshall, F. H. A. Physiology of reproduction. 1910.
- Mills, Wesley. Dog in health and disease. New ed. 1906.
- New York and New England association of railway surgeons. Transactions. v. 29, 1919.
- Rosanoff, A. J. Manual of psychiatry. 5th ed. 1920.
- Sternberg, M. L. George M. Sternberg; a biography. 1920.
- Thompson, Loyd. Syphilis. 1916.
- University of Pittsburgh. School of medicine. Studies on epidemic influenza. 1919.
- Vaughan, V. C. Sex attraction. 1920.
- Ward, A. R. & Gallagher, B. A. Diseases of domesticated birds. 1920.

ALBANY MEDICAL ANNALS

Original Communications

THE MANAGEMENT OF CHRONIC RENAL DISEASE BASED UPON THE NEWER LABORATORY DIAGNOSTIC METHODS.

*Read at the Thirteenth Annual Meeting of the Third District Branch of
the Medical Society of the State of New York,
Albany, October 9, 1919.*

BY NELSON K. FROMM, A. B., M. D.,

Instructor in Medicine and Neurology, Albany Medical College.

A survey of medical literature of the past five years reveals an enormous amount of clinical and chemical investigation along the lines of kidney function; it being appreciated that the presence or absence of tube casts and albumen forms no criterion of the ability of diseased kidneys to perform their normal work at their full capacity.

Until recently the determination of renal activity has been based upon the qualitative and quantitative excretion of various dyestuffs, complex substances normally present in the urine, or materials other than dyestuffs, ingested or injected. By observing the kidney in this manner, variable results have been obtained specially with phthalein, lactose, potassium iodid, urea, sodium chlorid and creatinin.

As a result of clinical investigation, it has been noted that the elimination of nearly all of the substances named may be at times increased quantitatively in spite of renal lesions. This apparent paradox, especially an excessive phthalein output and a

rapid urea elimination, has been explained by Schlayer and others on the basis of over-activity of the involved epithelium, in mild renal disease, due to the excessive response evoked in a semi-intact organ by the irritation resulting from inflammatory processes.

To supplant functional tests yielding findings at variance with clinical observation, Mosenthal following the lead of Hedinger and Schlayer has devised a qualitative and quantitative test of the mode of urinary function as measured by the specific gravity, sodium chlorid, water and nitrogen elimination in two hour periods. Mosenthal shows how the urinary response to a full dietary known as the "Nephritic Test Meal" containing a reasonable amount of fluid, salt and purins, varies in health and disease. Properly interpreted, the results of this meal show not only the presence or absence of impairment of renal function but also its intensity.*

A word as to the value of the Test Meal as compared to other of the better known functional tests. As ascertained by Mosenthal and others, the tests in order of their positive appearance and furnishing the first signs of impairment are: the Renal Test Meal, the phthalein test, compilation of Ambard's urea coefficient and blood urea nitrogen estimation. The maximum involvement is most frequently seen in interpretation of the test diet, less frequently in phthalein output, and least often in the estimation of Ambard's coefficient. The details of the performance of the majority of the tests mentioned are familiar to all. The mode of exhibition and interpretation of the Renal Test Meal will be discussed at some length.

The test consists of a definite, carefully measured dietary regime of twenty-four hours duration composed of three meals. It contains approximately 13.5 grams of nitrogen, 8.5 grams of

*Since the presentation of the above paper by the writer, Mosenthal has made certain modifications in his renal functional test admitting of its wider application especially in ambulant cases, or those for whom hospitable facilities are not available. In view of these modifications some clinicians are under the impression that Mosenthal has discontinued the estimation of chlorid and nitrogen elimination in the diurnal and nocturnal urinary specimens. This is erroneous. In a personal communication to the writer dated November 5, 1920 Mosenthal states emphatically that he is still using nitrogen and chlorid determinations and considers them of very great value in conjunction with the dietary intake and urinary specific gravity. The application of the modified functional test to ambulant cases will be the subject of a paper to be published at an early date by the writer.

sodium chloride, 1,760 c.c. of fluid, and a considerable quantity of purin material in the form of meat, soup, tea and coffee. All these substances act as diuretics, and it is on the mode of excretory response to such stimuli that the interpretation of the test meal findings depends. It is in no way essential that all the meals be taken in their entirety, nor that the food be exactly as indicated, the only requirement being that the chemical content of food taken and quantity of fluid injected be carefully noted. There are several factors that are essential. All food must be as salt free as practicable. Salt for each meal is furnished in weighed amounts, a capsule containing 2.3 grams being given with each meal. No food nor fluid of any kind is allowed except at meal time. The complete test diet as employed by Mosenthal is as follows:

Breakfast, 8 A. M.

Boiled oatmeal, 100 gm.	Coffee, 160 c.c.
Sugar, 1-2 teaspoonfuls	Sugar, 1' teaspoonful
Milk, 30 c.c.	Milk, 40 c.c.
Two slices bread (30 gm. each)	Milk, 200 c.c.
Butter, 20 gm.	Water, 200 c.c.

Dinner, 12 NOON

Meat soup, 180 c.c.	Tea, 180 c.c.
Beefsteak, 100 gm.	Sugar, 1 teaspoonful
Potato (baked, bashed or boiled), 130 gm.	Milk, 20 c.c.
Green vegetables, as desired	Water, 250 c.c.
Two slices bread (30 gm. each)	Pudding (tapioca or rice), 110 gm.
Butter, 20 gm.	

Supper, 5 P. M.

Two eggs, cooked in any style
Two slices bread (30 gm. each)
Butter, 20 gm.
Tea, 180 c.c.
Sugar, 1 teaspoonful
Milk, 20 c.c.
Fruit (stewed or fresh), 1 portion
Water, 300 c.c.

No food or fluid is to be given during the night or until 8 o'clock the next morning (after voiding), when the regular diet is resumed.

Patient is to empty bladder at 8 a. m. and at the end of each period, namely, at 8 a. m.-10 a. m.; 10 a. m.-12 n.; 12 n.-2 p. m.; 2 p. m.-4 p. m.; 4 p. m.-6 p. m.; 6 p. m.-8 p. m.; 8 p. m.-8 a. m. the following morning.

In certain instances laboratory facilities may not be accessible. In this case if we determine only the quantity and the specific gravity of each two hour and night specimen thus obtained, we can draw valuable inferences regarding the ability of the kidneys to excrete a concentrated urine.

If we have access to a laboratory, in addition to determining the amount and gravity of each specimen, we estimate the sodium chlorid and nitrogen content of the day and night urines and balance the food and fluid intake with the urinary output.

Interpretation of the findings obtained with the Renal Test Meal results in the grouping of three main sub-heads; namely:

- (1) The characteristics of the day urine.
- (2) The quantity of water, sodium chlorid and nitrogen excreted in twenty-four hours.
- (3) The characteristics of the night urine.

This leads us to a discussion of the findings in health and disease.

IN HEALTH.

Normally—Mosenthal and his co-workers found the following facts to be true:

1. *The day urine*: This shows that the specific gravity of the two-hourly specimens is not "fixed" but varies inversely to the volume of the urine, with an average variance of 9 points.

2. *The quantity of water, sodium chlorid and nitrogen excreted in twenty-four hours*:

- (a) Normally the urinary output should be 200 to 400 c.c. less than the fluid intake, thus allowing for excretion of water by the lungs, skin and intestines.

CHART I
NEPHRITIC TEST MEAL IN A NORMAL SUBJECT

Time of Day	Urine		Sodium Chlorid		Nitrogen	
	c.c.	Sp. Gr.	Per Cent	gms.	Per Cent	gms.
8-10	315	1.006				
10-12	128	1.014				
12-2	120	1.017				
2-4	122	1.020				
4-6	76	1.028				
6-8	100	1.027				
Total Day	861		0.78	6.71	1.02	3.80
Night 8-8	248	1.025	0.69	1.71	1.23	3.05
Total 24 Hrs.	1109			8.42		11.85
Intake	1760			8.50		13.40
Balance	651			0.08		1.55

Note: There is a wide variation in the specific gravity; the night urine is moderate in amount; water, sodium chlorid and nitrogen eliminations are normal.

(b) The normal kidney should excrete about all the sodium chlorid taken and

(c) approximately 90 per cent of the nitrogen intake; the concentration of the latter in any single specimen should be 1% or over.

3. *The night urine*: The specific gravity averages 1018 or higher. The nitrogen concentration is over 1% and the volume should never be more than 700 c.c.

THE URINARY RESPONSE TO THE "TEST MEAL" IN DISEASE

1. *The day urine*: The kidney expresses its diminished power to functionate by a fixation of gravity, *i. e.*, a fixation of its concentration. The diseased organ loses its flexibility as it were, and is unable to yield a urine of low, medium, or high gravity as occasion demands, to maintain the proper chemical equilibrium of the blood; the power to answer a demand for a more concentrated or more dilute urine no longer exists.

2. *The quantity of water, sodium chlorid and nitrogen eliminated in twenty-four hours*: Impaired renal function may be associated with a retention of one or all of these elements.

3. *The night urine*: An increased excretion of night urine of low gravity and low nitrogen concentration, or Nycturia, as it is called, the amount being fixed arbitrarily at 700 c.c. or more, is an indication of impaired function. A mere increased noc-

turnal frequency (pollakiuria) should not be confounded with an increase in total amount. Nycturia is a compensatory phenomenon to bring about the elimination of solids which a defective kidney cannot excrete except at lower concentration than normal. Mosenthal considers that a true Nycturia is one of the earliest and most reliable indications of impaired renal function.

The Nephritic Test Meal yields distinctive results in the different types of renal disease. These will now be discussed in detail.

1. *Chronic interstitial (vascular or glomerular) nephritis.* In advanced cases when the reserve power of the kidney is restricted, it becomes necessary for such quantitatively reduced organs to function constantly at their maximum capacity with the result that the urinary secretion varies little from hour to hour. In early cases nocturnal polyuria is usually the first signs of impairment. In advanced degrees of interstitial nephritis we note the following factors indicating renal insufficiency:

CHART 2

NEPHRITIC TEST MEAL IN A CASE OF CHRONIC INTERSTITIAL NEPHRITIS

Time of Day	Urine c.c.	Sp. Gr.	Sodium Chlorid		Nitrogen	
			Per Cent	gms	Per Cent	gms.
8-10	24	1.005				
10-12	106	1.006				
12-2	82	1.007				
2-4	83	1.008				
4-6	0					
6-8	230	1.008				
Total Day	525		0.12	2.63	0.25	1.28
Night 8-8	1110	1.007	0.12	1.37	0.20	2.27
Total 24 Hrs.	1665			4.00		3.55
Intake	1850			8.50		13.40
Balance	185			4.50		9.85

Note: The night urine shows marked increase in volume; nitrogen excretion is low; there is fixation of specific gravity.

- (a) Marked fixation and lowering of the specific gravity.
- (b) A diminished total output of sodium chlorid and nitrogen.
- (c) A tendency to total twenty-four polyuria and
- (d) A night urine showing an increase in volume, lowering of the gravity and a concentration of nitrogen under one per cent.

2. *Chronic parenchymatous (tubular) nephritis:*

The diagnostic criteria vary, depending upon whether or not oedema is present. As an average finding these cases show:

- (a) The specific gravity tends to be high and "fixed."
- (b) There is a diminished output of sodium chlorid and water.
- (c) A nocturnal polyuria and on the other hand,
- (d) A practically normal nitrogen excretion.

3. *Renal congestion resulting from cardiac decompensation.*

Here we note following the use of the test meal:

- (a) A fixation of gravity about at the level of 1.020.
- (b) A diminished output of sodium chlorid.
- (c) A diminution in the amount of the day urine.
- (d) A normal nitrogen elimination and
- (e) A normal night urine.

CHART 3
NEPHRITIC TEST MEAL IN A CASE OF CHRONIC PARENCHYMATOUS NEPHRITIS

	Urine		Sodium Chlorid		Nitrogen	
Time of Day	c.c.	Sp. Gr.	Per Cent.	gms.	Per Cent	gms.
8-10	32	1.025				
10-12	20	1.024				
12-2	54	1.024				
2-4	64	1.027				
4-6	64	1.028				
6-8	66	1.026				
Total Day	300		0.17	0.50	1.78	5.34
Night 8-8	595	1.020	0.08	0.48	0.93	5.53
Total 24 Hrs.	895			0.98		10.87
Intake	1760			8.50		13.40
Balance	865			7.52		2.53

Note: Retention of water and sodium chlorid is marked; nitrogen excretion is practically normal; there is fixation of specific gravity.

TREATMENT.

Based largely upon the interpretation of the "test meal" findings it is possible for us to treat our nephritic cases with a degree of scientific foundation hitherto impossible.

The word "treatment" used in connection with renal disease is really a misnomer. "Management" would be more exact, since as aptly expressed by Janeway, treatment amounts to the "practical management" of the patient, because, excepting in the rarest instances, we have no real treatment of the disease in question.

Drug therapy can be dismissed in a word or two. In hypertension, when excessive, giving rise to danger of arterial rupture, the nitrites best given in the form of the spirit of glonoin are indicated. If taken over long periods the nitrites lose their efficacy. We must also consider their stimulating effect upon the cardiac musculature, for in nephritis we usually have a tumultuous hypertrophied heart and any measure or drug which increases the cardiac force over long periods is defeating the end for which the drug is administered. In this connection mention should be made of benzyl benzoate which seems to give promise in cases of hypertension because of its anti-spasmodic virtues. But this fact must be continually borne in mind, namely, that the various theories regarding hypertension in nephritis assume that it is a compensatory process—an effect to force more blood through the diseased kidneys, to increase elimination; hence an attempt to reduce increased arterial tension of renal origin probably is not good therapeutics. This brings us to management and management means nothing more or less than a careful dietary regime. The two main types of nephritic disease require individual dietetic supervision, so we will discuss each type.

CHRONIC PARENCHYMATOUS NEPHRITIS

Since the kidney which is undergoing tubular degeneration does not eliminate salt and water well, naturally our first endeavor is to place our patient on a salt poor diet and limit his fluid intake. He must learn to take his food dry and as little fluid as possible between meals, not much more than a pint and one-half in twenty-four hours.

It is a general practice to limit meats and others forms of protein indiscriminately in all forms of kidney lesions. This I will endeavor to point out is often a disastrous mistake. The parenchymatous nephritic eliminates nitrogen well and it is of course the nitrogen portion of the protein molecule in which we are interested. This is explained by the probable fact that the glomerular epithelium in the form of the disease in question is intact, and it is the glomerular tuft that has the nitrogen eliminating function.

In this condition instead of depriving our patient of protein, one must make sure rather, that he is not undergoing protein starvation, and drawing upon his own protein reserve at the expense, especially of his cardiac musculature. To again quote Janeway, who says "to tell every patient with albuminuria to stop eating meat is evidence either of colossal ignorance or of inexcusable mental laziness." Janney also discusses this point. He says that nephritics may and often do attain an unfavorable condition because of low protein intake for a long period. He holds that these patients are frequently rather weak and obese because the average man will make up promptly in fats and carbohydrates for what he is prevented from taking in the way of protein food. The occurrence of obesity should be avoided in nephritis, the obese nephritic being usually weak and neurasthenic.

The problem is not how much nitrogen the kidney is able to eliminate, but how much protein is needed to prevent destruction and utilization of body proteid. The individual of average weight and build needs about sixty grams of protein, aside from his carbohydrates and fats. To reduce the protein needs to familiar measures we can say that there is approximately sixty grams of protein in any of the following: seven eggs, one and one-half quarts of milk, one-half pound lean meat, one-half pound of chicken. Since the average individual requires at least 2,500 calories to maintain metabolic equilibrium, he demand enough carbohydrates and fats to make up the difference between 250 (the value of sixty grams of protein) and 2,500. The so-called "exclusive milk diet" in tubular nephritis is another great fallacy commonly indulged in. An individual on a pure milk diet to obtain 2,500 calories requires about four quarts in the twenty-four hours. This would of course be administering a prohibitive amount of fluid and about 110 grams of protein, or twice his minimal requirement. One quart of twenty per cent cream will furnish the needed calories and enough protein to spare the body tissues.

Of course it is needless to point out that the old theory, that red meat is more harmful than white to the nephritic has been exploded.

Epstein as a result of the observation of himself and others holds a rather unique view as to the needs of protein in parenchymatous nephritis, especially in those cases presenting oedema as a part of the symptom complex. Kohman during his work in the investigation of a problem of war dropsy produced experimental oedema in rats by a diet low in protein and caused the oedema to disappear by the addition of protein to the feeding.

As Epstein points out, in some cases of parenchymatous nephritis the albuminuria amounts to as much as fifty grams of protein daily for months. The source of the urinary albumen is the blood serum. In view of the fact that the total quantity of protein in the serum in the average individual is approximately 200 grams; the daily loss incurred by the blood in this manner may constitute a large percentage of protein present in the circulation. This loss causes a hydremia resulting in a decrease in the osmotic pressure of the blood, thereby favoring the absorption and retention of fluid by the tissues. Therefore, Epstein recommends the administration of enormous amounts of protein, as much as 200 grams daily to his nephritics, claiming very good results in a number of cases. Epstein's spectacular conclusions have not as yet the support of other clinicians.

CHRONIC INTERSTITIAL NEPHRITIS.

Bearing in mind the "Test Meal" findings the proper dietary indication suggests itself.

We should limit, but not necessarily totally, the sodium chlorid intake while protein must be cut to the limit of safety. Extensive restriction of protein is only advisable in the acute stage of nephritis and then only for a limited period. The straight milk diet is as harmful here as in the previously described condition, because of the large proportion of protein in the amount of milk necessary to supply the body requirements. In severe cases the protein may be limited temporarily to thirty grams in twenty-four hours.

Because of the incidental anemia present in interstitial kidney disease the administration of iron in the form of plenty of green vegetables supplies an urgent need.

Another characteristic of vascular nephritis is the tendency to acidosis. To combat this we administer foods which produce an ash of alkaline or basic reaction, such as the various roots, tubers, and stems used for food. Examples of such are; asparagus, carrot, celery, citrus fruits, lettuce, potato and spinach. These fruits and vegetables have also a high calcium content. This serves not only to meet the daily requirements for this element but also helps divert the elimination of phosphorus from the kidney to the intestine, as phosphate is often eliminated with difficulty by an impaired kidney. In this disease, thoroughly ripe banana forms a very valuable article of food not properly appreciated by physicians or layman. It recommends itself because of its high caloric value, low protein content, and alkaline ash.

REFERENCES

- EPSTEIN: *New York State Journal of Medicine*, 1919, XIX, 8.
 HEDINGER and SCHLAYER: *Deutsche Archiv für klinische Medizin*, 1914, CXIV, 120.
 JANEWAY: *American Journal of the Medical Sciences*, 1916, CLI, 157.
 KOHMAN: *Proceedings of the Society of Experimental Biology and Medicine*, 1919, XVI, 121.
 MOSENTHAL: *Journal of the American Medical Association*, 1916, LXVII, 913.
 Archives of Internal Medicine, 1915, XVI, 733.
 Archives of Internal Medicine, 1918, XXII, 770.

ALBANY HOSPITAL.

EIGHTEENTH REPORT OF PAVILION F, DEPARTMENT FOR MENTAL DISEASES, FOR THE YEAR ENDING JUNE 30, 1920.

BY J. MONTGOMERY MOSHER, M. D.,

Attending Specialist in Mental Diseases.

To the Board of Governors:

I have the honor to present the eighteenth report of Pavilion F, for the year ending June 30, 1920.

There remained in the Pavilion on July 1, 1919, thirty patients—fourteen men and sixteen women. There have been admitted one hundred ninety-eight men and one hundred fifty-five women. The whole number of patients under treatment was, therefore, three hundred eighty-three.

There have been discharged three hundred forty-nine patients

—one hundred ninety-three men and one hundred fifty-six women, and there remained in the Pavilion at the end of the fiscal year, nineteen men and fifteen women.

The following tables show the forms of disease and the results of treatment for the year, and since the opening of the Pavilion:

TABLE I.—SHOWING THE FORMS OF DISEASE AND THE RESULTS OF TREATMENT FOR THE YEAR ENDING JUNE 30, 1920.

FORM OF DISEASE	Recov- ered		Im- proved		Unim- proved		Died		Remain- ing		Total		Total
	M	W	M	W	M	W	M	W	M	W	M	W	
Acute delirium.....	2	3	1	3	2	...	2	2	2	2	7	10	17
Confusional insanity.....	3	1	5	12	7	11	...	1	2	16	26	42	
Melancholia.....	...	1	7	11	8	9	...	...	2	15	23	38	
Mania.....	1	1	1	7	5	9	...	1	...	8	17	25	
Primary dementia.....	7	8	11	5	1	...	4	23	13	36	
Recurrent insanity.....	2	2	1	3	...	...	...	3	5	8	
Chr. delus. insanity.....	1	8	9	...	...	...	...	8	10	18	
General paralysis.....	3	...	24	3	2	...	1	1	30	4	34
Terminal dementia.....	9	4	11	8	2	3	3	6	25	21	46
Idiocy and Imbecility.....	1	4	5	7	...	...	...	6	11	17	
Alcoholic delirium.....	3	1	1	...	...	...	...	...	1	4	2	6	
Alcoholism.....	13	1	2	...	...	1	...	16	1	17	
Drug addiction.....	5	3	3	1	...	1	...	9	4	13	
Neurasthenia.....	1	...	6	3	...	2	...	2	...	9	5	14	
Hypochondriasis.....	1	2	1	...	...	...	...	2	2	4	
Epilepsy.....	3	1	2	1	...	...	1	5	3	8	
Hysteria.....	4	...	2	...	...	...	...	6	6	
Organic brain disease.....	1	...	2	...	2	...	1	6	...	1	
Cerebral concussion.....	1	...	...	...	...	...	...	1	...	2	
Chorea minor.....	1	...	...	...	1	...	1	1	6	
Meningitis.....	2	...	...	2	...	2	
Tuberculosis.....	1	...	...	...	1	...	1	1	1	2	
Encephalitis.....	1	...	...	...	1	...	1	3	...	3	
Organic heart disease.....	1	...	...	1	1	
Arthritis deformans.....	1	...	...	1	1	
Disease of stomach.....	1	...	1	...	...	...	...	2	...	2	
Nephritis.....	1	2	...	1	1	...	3	2	5	
Carcinoma.....	1	...	...	...	...	...	...	1	1	
Paralysis agitans.....	1	...	...	...	...	1	...	1	
Huntington's chorea.....	1	...	...	...	...	1	...	1	
No diagnosis.....	5	1	6	
Totals.....	10	7	70	69	97	70	11	9	19	15	212	171	383

TABLE II.—SHOWING THE FORMS OF DISEASE AND THE RESULTS OF TREATMENT SINCE THE OPENING OF THE PAVILION, FEBRUARY 13, 1902.

FORM OF DISEASE	Rec- v- e- d		Im- Pro- v- e- d		Unim- pro- v- e- d		Died		Remain- ing		Total		Total
	M	W	M	W	M	W	M	W	M	W	M	W	
Acute delirium.....	58	68	26	39	9	28	19	24	2	2	114	161	275
Confusional insanity...	24	19	70	87	72	120	5	6	1	2	172	234	406
Melancholia.....	37	58	88	187	102	191	7	16	2	2	234	454	688
Mania.....	14	25	21	54	59	84	1		1		96	163	259
Primary dementia.....	11	10	58	47	106	65	2		4		181	122	303
Recurrent insanity....	1		21	30	22	35					44	65	109
Chr. delus. insanity...			5	9	80	81		1			85	91	176
General paralysis.....			19	2	127	22	8		1	1	155	25	180
Terminal dementia.....			70	55	212	179	51	33	3	6	336	273	609
Idiocy and Imbecility..			27	26	68	66	2				97	92	189
Alcoholic delirium.....	334	21	51	8	6	2	47	2		1	438	34	472
Alcoholism.....	20	5	527	67	42	10	5		1		595	82	677
Drug addiction.....	18	13	67	63	15	9	4	5	1		105	90	195
Ptomaine poisoning....	2	2									2	2	4
Nephritis.....			3	4	6	2	17	5			26	11	37
Eclampsia.....		1	2	1		1		1			2	4	6
Epilepsy.....	1		40	14	35	17	1			1	77	32	109
Neurasthenia.....	5	2	34	31	8	17			2		49	50	99
Hysteria.....	4	18	5	61	1	13					10	92	102
Chorea minor.....	1	3	1	2	2	1			1		5	6	11
Exophthalmic goitre...				1								1	1
Tic douloureux.....				1								1	1
Hypochondriasis.....	1		21	2	8		1				31	2	33
Organic brain disease..			20	12	36	10	28	15	1		85	37	122
Cerebral concussion....	9	2	6		1			2			16	2	18
Oedema of the brain....					1		1	2			2		2
Locomotor ataxia.....			5	3	7	2		1			12	7	19
Myelitis.....					1	2					1	4	5
Arthritis deformans....						1						2	2
Meningitis.....	1		1	2		1	17	3			19	6	25
Multiple neuritis.....			1			1					1	1	2
Paralysis agitans.....					4	1	5				7	1	8
Hydrophobia.....							1				1		1
Tetanus.....							1				1		1
Tuberculosis.....			12		5	2	33	6			50	8	58
Typhoid fever.....	3	1									3	1	4
Liver disease.....		3		1			2	2			2	6	8
Pneumonia.....	10						27	6			37	6	43
Heart disease.....			5	1	4		10	3			19	4	23
Pernicious anaemia.....				1				1				2	2
Chlorosis.....								1				1	1
Septicaemia.....							2	1			2	1	3
Disease of digestive tract			1		1		1				3		3
Fracture of skull.....			1	1	2		5	1			8	2	10
Multiple fibromatosis..								1				1	1
Carcinoma.....				1	3			1			3	2	5
Strangulated hernia....							1				1		1
Pleurisy.....			1					1			1	1	2
Malingering.....					1						1		1
Insolation.....	2										2		2
Encephalitis.....			1				1		1		3		3
Aniline poisoning.....	1										1		1
Influenza.....			1					3			1	3	4
Huntington's chorea....					1						1		1
No diagnosis.....											44	27	71
Totals.....	557	251	1211	813	1047	963	303	143	19	15	3181	2212	5393

The average daily number under treatment for the past nine months has been thirty-two. The number of beds is thirty-three. The highest number of patients at any one time was forty-one and the lowest twenty-four. The total number of days of treatment was 11,574, making the average duration of residence thirty-three days.

An ancient regulation of the Governors of the Hospital exacts a report of his work and experience from each attending physician upon the completion of his recurring service. At the time this rule was adopted the term of attendance was three months, and at the expiration of this period, another group of physicians and surgeons took charge of the wards. In this way the hospital utilized the experience and varying ideas of a larger staff. This was regarded as an advantage. It has been found, however, that changes of methods are detrimental to the individual patient, and that the interruption of procedure during the progress of an acute disease is contrary to his interests. Knowledge of the origin and progress of an ailment cannot be lightly discarded, and the system has been gradually abandoned to meet the better conception implied in the phrase "continuous service." The heads of each department are now appointed for a term of one year, with reappointment after satisfactory performance of duty.

For the department of mental diseases the interpretation of the regulation has been the requirement of an annual report, and an effort has been made not only to record the statistical events of the year, but to interpret its events, that there might result some progress in the treatment of patients. Even the casual observer must find his interest and enthusiasm aroused and his wits stirred by the problems and vagaries of five thousand erratic individuals. It may be regretted that too little has been accomplished for the elucidation of mental phenomena in that aggressive field of modern medicine known as "research," though casual efforts have been made, from time to time, to ascertain the relations between patent physical manifestations and mental disorder. For example, certain demonstrations of abnormal glandular activity have been suggestive of possibilities in the line of discovery. There has appeared an occasional case of paraly-

sis agitans in a young person. The symptoms of paralysis agitans are essentially those of old age, and undoubtedly arise in disturbance in the cerebral cortex, but it is difficult to assume senile deterioration in a patient in the thirties. The theory has been advanced that some loss of balance in glandular metabolism is responsible for the disease, but no definite conclusion has been attained. Enlargement of the thyroid is not infrequently observed in states of maniacal excitement, to disappear with the subsidence of the attack. There has also been seen a temporary darkening or bronzing of the skin in attacks of delirium or confusion with hallucinations. These peculiarities, and others, however, attract attention and arouse curiosity, but their place in scientific knowledge is that of the preliminary stage of observation. The effect of the ductless glands upon bodily structure and bodily function is acknowledged but the complicated relations are still a matter for laboratory work; and laboratory work in this direction has not yet fully developed its possibilities for the benefit of human beings. From the incidental scrutiny of this group of symptoms upon the hospital ward the inference is that they are the effect of nervous disturbance rather than the cause. The history of the patient sustains this theory.

The origin of a mental attack is almost invariably traced to worry or anxiety. Everybody, of course, is subject to these emotions, and the great majority meet difficulties and accept responsibilities with a minimum of friction. There are many, however, whose stability is unequal to the task, and who permit or cultivate, in ignorance, the evil dominance of an unhealthy and insidious state of mind. The pride which goeth before a fall adds its evil influence to prolong the stress and suppress the natural exhibition of feeling which would be the outlet and salvation of the primitive man. The conventions of civilization exact a measure of self-repression, and are not always tolerant of the exploitation of private and personal woes. The sufferer is not always aware that his distresses are the common heritage of the race, and that he is not an exceptional victim, but only one of a large group which gives him no greater distinction than the color of his hair, contour of his chin or the length of his limbs. He is consequently somewhat startled when the inquisi-

tor, penetrating the camouflage of insomnia, dyspepsia, palpitation of the heart, headache and the formidable catalogue of incongruous complaints, is interested to ascertain whether, if he be young, he has been disappointed in love; or, if more mature, his home is disordered by domestic strife; or, if in advanced life, there is some threat of dishonor or of failure in his estate.

It is undoubtedly true that in the end the physical evidences of disease are so conspicuous as to divert attention from their origin. They produce a condition so threatening that the source is submerged or lost from view. And it is likewise true that the restoration of normal physical function restores the equilibrium and supremacy of the nervous system. It appears that the patient passes through the various stages of his disease which culminate in a crisis before the return of health. Physical anguish acts as a counter-irritant to divert the attention from its initial distraction and the clinical picture becomes that of a self-limiting disease which runs its course under certain lines. The principle of treatment rests upon this truth, and just as in a specific fever, depends upon conducting the patient toward the return of health by judicious management.

The experience with these five thousand patients in Pavilion F points to the nervous system as the corporeal hierarch. Through the sensory nerves the forces of the external world are conveyed to the brain, there to be coordinated and arranged, and from the brain the results of these acquisitions are in turn transmitted by the motor nerves to the world without. The duty of the nervous system is the adjustment of the individual to his environment. It is for him to establish his potentiality and to determine his proper place. From those who fail to interpret this relation the inmates of hospitals are recruited. The saving factor lies in the opportunity given each man to ascertain his capacity and resources, and sensible men accept their social situation as inevitable. Occasionally and rarely, a rude interruption, beyond the control of man, disturbs the evenness of existence. Such was the effect of the war, and to the nervous wrecks who returned from that bitter trial no blame may be attached. To adolescent love, domestic infelicity, or financial indiscretion cannot be ascribed the shattered victims who enter hospitals, to

suffer protracted periods of mental and physical incompetency. The public has been largely misled by the picturesque term "shell-shock," which finds a ready acceptance because the idea of a sudden and overwhelming fright appeals to the average intelligence. But experience shows that the nervous system is less susceptible to disaster from sudden emotional impact than from prolonged stress. The vast majority of young men admitted to hospitals have never seen or heard an exploding shell, and many did not leave the home camps. But the symptoms were analogous in all cases. They may be interpreted, from observation of the morbid state, to arise from the contrasts of civil and military life, and are not necessarily due to sudden emotion.

A schoolboy of eighteen returns home each evening to the care and supervision of his parents. His lines lie in easy places. The most severe punishment to which he is liable is some temporary deprivation of pleasure. His responsibilities are abridged by the indulgence of a schoolmaster and the solicitude of a mother. A lack of appetite, a suggestion of headache, any expression of dissatisfaction, any slight alteration in conduct, is sufficient for an inquiry and a correction which he accepts with passive submission. He is caressed and protected and encouraged in his own conceit. Life is pleasant and enticing, and only in the inexorable and deliberate course of events are developed the varying episodes, pleasant and unpleasant, which he meets to establish his position in life. Suddenly comes the call to arms, and all is changed. Obligations which would have been assumed gradually and cautiously over a period of years are thrust upon him over night. Away from home and its protecting hands, among strangers in a strange place, submitting to harsh and rigid discipline, strictly accountable to stern authority for even unwitting lapses in conduct, the novel sensation of personal liability demands recasting of all previous experience. Uncertainty of the future, fear of the unknown, vague anticipation of strife, injury and death, intensify the dread of a situation from which there is no escape. A confession of cowardice is not expected of an American boy, and the record of the war has well justified this confidence in the army. But the nervous tension inci-

dent upon suppression of natural emotion continued for months, and when the end came found thousands of youths unstrung and agitated. The hypothetical schoolboy returns home changed in manner and bearing. He is surly, irritable and restless. He is irregular in habits and often rebellious. He becomes unmanageable, and frequently violent. He concentrates upon no work, and leaves tasks unfinished. He is a source of anxiety and trouble, the more so because of threatening demoralization of his future. Only the most cautious supervision saves him from permanent disability.

Study of such a case reveals that the disorder is one of disease, rather than of moral obliquity. The symptoms vary from day to day, and there are intervals when the normal ingenuousness and affability are momentarily displayed. This paroxysmal or periodic manifestation of symptoms is fundamentally characteristic of the morbid activities of the nervous system, and by its presence the clue is obtained. The relations of the normal and abnormal intervals are eagerly noted, as the increasing frequency and duration of the former is of favorable omen. The patient who is quiet and affable on one day may be unruly the next, and unless comparisons from week to week are instituted opinions and prognostications are misleading. An illustration in emphasis of this point may be permitted. As, perchance, some reader of this report may recall the essay on "Sir James Mac-Intosh," the plagiarism of the idea must be acknowledged, though the phraseology is far from suggestive of the original of Macaulay. A littoral pedestrian who is forced to run to escape a surging billow may believe the ocean is rapidly encroaching on the land; if he delay a moment to observe its recession he may assume there is no change in conditions; but, if he be cautious, and exact and waits patiently, he discovers that, though the wave recedes each time, there is a gradual advance of the tide, to be followed in due season by its ebb. So it is with disease. Long and patiently must be awaited the restoration of equilibrium and health.

The question is often asked in what way Pavilion F differs from any other institution for the insane. It is understood at once that it is a department of a general hospital, and it is agreed

that provision of this kind for the temporary detention of insane patients is much preferable to the use of a jail or a police station. This was the reason for its establishment. It is interesting to recall that when the petition was made a county official was disinclined to favor the construction of more than a few "padded cells," whatever such a contrivance may be. The hospital authorities declined to undertake the obligation unless the proposed department should be adapted to the general scheme of hospital management, and particularly that the services of the training school for nurses should be available. It was very soon discovered that patients might be successfully treated and returned to their homes without transfer to institutions for the insane. Further experience has confirmed this fact with the additional demonstration that there is a particular and peculiar class of patients for whom this service is effective. They are the patients who have yielded to stress and are suffering from nervous exhaustion of varying degrees, complicated by mental symptoms. It is almost an error to speak of them as mental cases, and it is unpardonable to regard them as insane. The line should be definitely drawn, even though definition is difficult and uncertain. The mental defect of an insane person represents an inherent incapacity to respond to standards of living, and it progresses gradually and steadily to actual loss of mind. In the vast majority of patients there is a structural defect or degeneration of the brain. In contrast with the insane may be placed patients with normal brain development whose function is temporarily perverted by exhaustion or poisons or other defects of nutrition, in which bodily activities play a large part. The symptoms are really of delirium, either pure or modified, and the prospects of restoration are good. In the treatment of these patients lies the opportunity of the general hospital, and it may be a source of satisfaction that our hospital is the pioneer in this branch of work and has sustained so nobly through eighteen years responsibilities accepted under some uncertainty and with some degree of apprehension. There has been no scientific research which has discovered a new disease, but there has been a gradual segregation and grouping of one class of patients, for

whose treatment and benefit a definite course of procedure has been announced.

It may not be strictly within the province of this report to refer to changes in the Board of Governors. But there have been three deaths in the Board during the year, and in each of these has been sustained a loss which was in some degree personal as well as official. It has so happened that details of the operations of Pavilion F have from time to time needed the attention and advice of Mr. Dudley Olcott, Mr. David A. Thompson and Mr. Albert Hessberg. Mr. Olcott stood firmly for the development of the service for mental cases and always regarded this department as a special feature of the hospital work, to be fostered and encouraged. Mr. Thompson expressed a similar interest. Mr. Hessberg, as a legal advisor, was frequently called upon and invariably responded without question. There may be defects in institutional management, and there probably always will be. But it is difficult to conceive of an honorary board of managers who would give more time and more thought toward the evolution of an ideal institution than has been manifested in the gratuitous work done for the Albany Hospital. The records of the enthusiasm and efforts of the men lost during the year just passed should be preserved as a most honorable manifestation of unselfish public service.

ACKNOWLEDGMENT

It is a pleasure, each year, to make public acknowledgment of the courtesy and cooperation of the City Department of Charities. By a special statute the Commissioner of Charities possesses the magisterial power of commitment for a few days of alleged cases of mental disease for observation and determination. In a large city like Albany there arise many instances of misbehavior for which the analysis afforded by this plan is necessary. It undoubtedly prevents many unjust detentions in custodial places, and relieves many temporarily distressing situations.

Commissioner Patton of the Charities Department has maintained the humane conception of his duties entertained by his predecessors. It is noteworthy that the policy adopted by this

office recognizes the uncertainties and the exigencies of disease. There have grown each year greater caution and greater hesitancy in adjudging a patient insane, and a system of procedure has developed which is probably unexcelled in any other district of the state. The Deputy Commissioner, Mr. William H. Erwin has accumulated an experience of twenty years in the technical method of determining the existence of insanity, and has made his duty a personal investigation of the difficulties and struggles of the patient and the environment of the home. He designates the examining physicians, prepares the papers, submits the results to the court and arranges for the transfer to the hospital for the insane. There appears to be common consent of the judiciary of the district that cases of alleged insanity be referred to the County Judge, the Honorable George Addington. Judge Addington has manifested an exceptional interest in this demand upon his services, and has repeatedly visited the hospital for conference with patients before rendering his decision. The aim of authorities and hospital alike has been directed toward the protection of the rights and liberty of the individual and it is believed that this sympathetic cooperation has resulted in an ideal system.

The events of each year add increasing emphasis to the excellence of the nurses. Reference has been made to the interpretation of mental disorders as self-limited, and it is well known that for such affections the ministrations of the nurse are peculiarly adapted. The expressions of sympathy and willingness have been acknowledged and appreciated by the patients, who frequently recognize the sole purpose to promote their comfort and restoration. To this mutual good-will may be ascribed the increasing evidences of freedom, which are shown in the number of open doors. In summer all patients who are able spend the day upon the lawn, which is attractively set with shade trees and flowering shrubs. Leaving the hospital "without leave" has become a practically negligible problem in administration. For the accomplishment of this much to be desired attitude of friendliness too much praise cannot be given Miss Flanagan, the nurse in charge, who has proved naturally adapted to the work she has chosen.

Our friends have maintained a genuine interest in promoting comfort and pleasure. Eight works of fiction have been added to the library by Mr. George Hawley, three have been received from Miss Zimmerman, three from Mr. Richard Murray, two from Mrs. J. Lewi Donhauser, and three from Miss Maude Bellshinger, who also presented a checker board and checkers. Packages of magazines have been given by Mr. D. Barton Kinne and by Miss Judy Clark. A cheque for twenty dollars and two gallons of ice cream for Christmas were donated by the Associated Charities, and holiday decoration of the wards was enhanced by the gift of five dollars from Mr. F. E. Newberry. A framed picture was sent by the estate of Mr. J. Townsend Lansing, late President of the Board of Governors. An unknown donor has provided the *Saturday Evening Post* for the year, and a former patient has continued for many years a subscription to *McClure's Magazine*. From Mr. James McCredie have been received two easy chairs which have added greatly to the comfort and convenience of feeble patients. To all of these friends gratitude is expressed.

Clinical and Pathological Notes

"*Taenia Solium*." By W. H. MORSE, M.D.

"'Taenia Solium!'" repeated my visitor, the Albany physician, after I had introduced the girl to him by that name. "'Taenia Solium!' That is an odd nickname for such an attractive little woman! Tapeworm! Ha, ha! Real name is Christina, I suppose?"

"Not at all," I replied. "Her name is *Taenia Solium*, straight. I had ought to know, because I named her."

"Of all things!" returned my visitor. "How is that?"

It was Sunday, and my guest had accompanied me to the Mission; and to the platform the girl had come to tell me of two or three "sunny sons" who were about to return to their native land, and wanted an equipment of "Ah-me-re-can" Testaments to carry to their friends over-seas. A bright Italian girl of sixteen, and one of our most devoted members. I told him the story after the session, when we had returned to the office.

I had a tapeworm, of which I was inordinately proud. I had it for twenty-two years, and *Taenia Solium* came on the day that I parted with it. It was not mine by virtue of my own personal relationship, but mine because in the course of practice I had obtained it. I had been in practice but a little more than two years, when the patient came and I relieved him. I felt so elated over it that I had to write Dr. Samuel B. Ward and tell him about it, and boast that it measured twenty-six feet in length. Ah, but the doctor did not congratulate me! Instead, acknowledging my letter, he wrote that I should have used the metric system in giving the creature's length.

As matter of course I preserved it in alcohol, and as another matter of course the jar in which it was contained, was kept, ethically indeed, on a shelf just above my desk, and conveniently exhibited advertisingly. On occasion I explained it to patients and others, and in consequence of the exhibit those needing appendectomy and those who were candidates for the tuberculosis sanitarium, "wondered" as to whether they had not "got one," after all.

At the time of the presidential campaign of 1904 there was a young Sicilian lawyer in the city, who in his earlier days had been a hard drinker, but had reformed, and spent a good deal of time on the stump, speaking for the prohibition candidate, the Rev. Samuel C. Swallow. I was under engagement and on the evening of October 31, as I sat reading the daily paper's declaration that Judge Parker was as good as elected, the call came, and I responded. It proved to be a tedious case. Late in the night I required an instrument from the office, and I sent the young man for it. When he returned with it, after a few minutes he left the chamber, and I saw no more of him until after midnight, when, having welcomed the little girl, I went to congratulate him. I found him down in the dining room on the couch, dead drunk. All the result that I could obtain on endeavoring to awaken him was a hiccoughing attempt to hurrah for Swallow, and hiss the name of Roosevelt. The advent of the baby had overthrown his temperance principles, surely.

Returning home, I went directly to bed, and did not go into the office until morning. Then, when I did so, the first thing

that I noticed was that the jar in which my tapeworm had reposed for a score of years had been taken from its shelf, and was on the desk, its paraffined cover broken, and—although its tenant was still in residence, it had a peculiar attenuated look, and but little of the alcohol remained. I was naturally vexed, and attributed that evident disaster to the bungling dusting of my wife's Swedish maid. I was unable to take her to task that morning, as at once I was busy.

Late in the afternoon my rounds brought me to the young lawyer's wife and baby. He was at home, repentant as could be, and when I came down stairs took me into the front room, and confessed his indiscretion. In his happiness the old longing had recurred, and he said that when he went on my errand, and had turned on the light, seeing some liquor, had drank it. My eyes were opened.

"Put on your hat, and come with me!" I said to him, and took him to the office.

"You got that drink from that shelf," I said to him, indicating the board above the desk.

"Yes."

I handed him the jar, nearly drained.

"And there is where you got your booze?"

He set the jar down hurriedly, pointing at its demoralized inmate.

Next day when I called at the house the young mother asked me to name the baby. Remarking that Italian and Latin affiliate, I suggested the advisability of a good sound Latin name. The idea was well received by both parents, and I named the new-comer *Taenia Solium*!

I have never seen the lawyer intoxicated since, and instead of my tapeworm I have *Taenia* as one of our most ardent little workers.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

BUREAU OF VITAL STATISTICS.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR

DEATHS FOR THE MONTH OF SEPTEMBER, 1920.

Consumption	9	Cerebro Spinal Meningitis	
Whooping Cough	2	Epidemic	1
Diarrheal Diseases	3	Cancer	8
Dysentery	1	Accidents and Violence	10
Pneumonia	6	Deaths under 1 year	17
Broncho Pneumonia	6	Deaths over 70 years	23
Bright's Disease	9	Death rate	15.45
Apoplexy	7	Death rate less non-resident	12.48

Deaths in Institutions.

	Non-Res.	Res.		Non-Res.	Res.
Albany Hospital	15	7	St. Margaret's Home ..	2	1
County House	0	4	St. Peter's Hospital	3	10
Homeopathic Hospital .	2	7	Maternity Hospital	0	4
Hospital for Incurables .	0	3	Albany Hospital Camp .	1	1
Little Sisters of the Poor	1	5	Births		194
Public Places	0	1	Stillborn		3

DIVISION OF COMMUNICABLE DISEASE.

Typhoid Fever	11	Mumps	1
Scarlet Fever	3	Pneumonia	14
Diphtheria and Croup	22	Influenza	2
Chickenpox	0	Encephalitis Lethargica	1
Smallpox	0	Epidemic Cerebro-Spinal	
Measles	1	Meningitis	1
German Measles	0	Bacillary Dysentery	1
Whooping-cough	22		
Tuberculosis	16	Total	95

Number of days quarantine for scarlet fever:

Longest..... 35 Shortest..... 30 Average..... 32½

Number of days quarantine for diphtheria:

Longest..... 0 Shortest..... 0 Average..... 0

Fumigations:

Rooms..... 54 Buildings..... 10

Milk bottles disinfected..... 73

Communicable Diseases in Relation to Schools.

	Reported D. S.F. M.
Public School No. 15.....	1

MISCELLANEOUS.

Cards posted for communicable disease	8	Vaccination dressings	425
Cards removed	6	Children examined for employment certificate	46
Notices served on schools ..	50	Number of employment certificates issued	47
Notices served on stores and factories	6	Taking specimens of blood for Wassermanns	0
Postal card returns sent to doctors	8	Taking smears for Gonococci	0
Postal card returns received from doctors	6	Postal cards sent to milk dealers	5
Inspections and reinspections ..	14	Dogs examined for rabies ..	1
Vaccinations	220	Dogs re-examined for rabies ..	1

Tuberculosis.

Living cases on record September 1, 1920.....		782
Cases reported:		
By card	16	
Dead cases by certificate.....	4	20
		<hr/>
		802
Dead Cases previously reported	5	
Dead Cases not previously reported	4	
Removed	127	
Died out of town	0	
Recovered	0	
Unaccounted for	0	136
		<hr/>
Living cases on record October 1, 1920		666
Total Tuberculosis Death Certificates		9
Non-resident deaths:		
Albany Hospital Camp	1	1
		<hr/>
Visits to cases of tuberculosis		176
Miscellaneous visits		14
Visits to physicians		12

LABORATORY REPORTS

Diphtheria.

Initial Positive	43	Release Negative	265
Initial Negative	247	Unsatisfactory	24
Release Positive	31		
		Total	<hr/>
			610

Sputum for Tuberculosis.

Positive	30	Unsatisfactory	1
Negative	126		
		Total	<hr/>
			157

Widals.

Positive	13	Unsatisfactory	5
Negative	38		
		Total	56

Meningococcus.

Positive	0	Negative	0
		Total	0

Wasserman tests	297	Gonorrhoea Examinations .	103
(positive 51)		(positive 30)	
Milk Analyses	154	Miscellaneous examinations .	14
Water Analyses	2		
Pathological Examinations .	0	Total examinations	1393

HEALTH PHYSICIANS' REPORT.

Cases assigned	35	Calls made	80
----------------------	----	------------------	----

DIVISION OF SANITATION.

Complaints	61	Garbage collected from 1st.	
Inspections	72	District	bbls. 500
Plumbing	11	Garbage collected from 2nd.	
Sanitary	61	District	bbls. 500
Reinspections	81	Garbage collected from 3rd.	
Plumbing	9	District	bbls. 675
Sanitary	72		

HEARINGS

Hearings	4	Cases heard	5
----------------	---	-------------------	---

Class of Cases.

Ashes	1	Plumbing	5
Pigs	1		

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION.

Inspections	91	Smoke	0
Old Houses	51	Blue or red	4
New Houses	40	Peppermint	9
Permits issued	57	Water test	11
Plumbing	51	Houses examined	31
Building	6	Re-examined	68
Plans submitted	3	Valid	17
Old buildings	2	Without cause	14
New buildings	1	Violations	0
Houses tested	24		

REPORT OF REMOVAL OF DEAD ANIMALS.

Horses removed	9	Cats removed	30
Dogs removed	9		
		Total	48
		Cases eggs removed	91

DIVISION OF MARKETS AND MILK.

Public market inspections .	21	Milk cans inspected	145
Market inspections	80	Milk cans condemned	0
Fish market inspections	9	Lactometer readings	345
Fish peddler inspections	0	Temperature readings	345
Slaughter house inspections	1	Fat tests	9
Rendering Establishment in-		Sediment tests	80
spections	0	Chemical tests	0
Pork packing house inspec-		Cows examined	1015
tions	4	Cows quarantined	2
Hide house inspections	0	Cows removed	16
Milk depots inspected	32	Complaints investigated	3
Stores inspected	19	Milk Houses inspected	95
Dairies inspected	95		

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—STATISTICS FOR OCTOBER, 1920.—Number of new cases, 234; classified economically: Free, 94; bed cases, 22; prenatal, 10; dispensary social service, 18; tuberculosis (pos.), 9; tuberculosis (super.), 0; hospital social service, 12; venereal social, 23. Paid, 140; limited means (bed cases), 67; metropolitan (bed cases), 53; metropolitan prenatal, 18; industrial bed cases, 1; industrial social cases, 1; Western Union, 0. Cases carried over from last month, 664; bed cases, 92; prenatal cases, 26; dispensary social service, 2; tuberculosis (total), 367; hospital social service, 48; venereal, 129; industrial, 0; Western Union, 0. Classification of bed cases: Medical, 96; surgical, 13; obstetrical, 29; prenatal, 28; confinements, 29; maternity, 3; miscarriages, 1; number of babies born, 32.

Visits for Nurses (all departments).—Number of visits with treatment, 1,599; for bed care, 1,012; prenatal instruction, 62; tuberculosis (super. and inst.), 74; venereal dis. instr., 60; hospital social service, 31; general social service, 139; for other purposes, 149; dispensary social, 21; supervision, 51.

Sources of Nursing Cases.—Metropolitan agents, 49; doctors, 81; nurses, 2; dispensary, 9; family or friends, 11; other sources, 18.

Disposition of Bed Cases.—Discharged recovered, 30; discharged improved, 76; discharged unimproved, 25; discharged dead, 11; discharged to other care, 31; carried, 106. Disposition of other cases: Prenatal—discharged to maternity care, 24; discharged to hospital, 0; discharged to other care, 0; carried, 30. Dispensary social service—Discharged to dispensary care, 18; carried, 2. Hospital social service—discharged home, 7; discharged dead, 0; discharged to dispensary, 0; discharged Little Sisters Poor, 1; discharged Samaritan Hospital for Rad. T., 1; carried under Superintendent, out of hospital, 15; in hospital, 10. Venereal—discharged

cured, 0; discharged temporarily, 12; discharged to other care, 5; carried by dispensary, 46; carried under Superintendent, 74; carried under care at the House of Good Shepherd, 11; under supervision H. G. S., 11. Tuberculosis—discharged dead, 0; discharged, left town, 0; discharged, not tuberculosis, 0; carried (positive), 325; carried (supervision), 59. Total number of cases carried over into November, 583.

South End Dispensary Report.—Number of clinics, 91; surgical, 13; medical, 9; gynecological, 9; prenatal, 3; eye and ear, 15; venereal, 7; nerve, 4; nose and throat, 8; skin, 4; children, 7; lung, 2; children's lungs (observation clinic), 4; clinics with doctor attending, 88; clinics without doctor attending, 3; number of new patients treated, 115; number of old patients treated, 500; total number of patients, 615.

Industrial Dispensary (at Huyck's Mills).—Number of clinics held, 19; number of new cases treated, 22; number of old cases treated, 148; total number treated, 170; number of physical examinations, 12.

No industrial cases are really discharged, but we do not add them on to our cases carried nor do we add on the South End Dispensary cases as carried on our general report. They are kept separate.

Number of metropolitan calls this month, 411; check received for last month's metropolitan calls, \$220.70; check received for industrial clinics last month, \$23; check received for Western Union calls last month, 0.

Industrial Department Report.—Number of clinics, 19; number of new cases treated, 22; number of old cases treated, 148; number of men cases treated, 106; number of women cases treated, 64; number of physical examinations, 12; number of home calls, social, 1; number of home calls, nursing, 5; number of hypo's for vaccine for cold, 3; Number referred for X-ray, 3; number referred for glasses, 6; number referred for nose and throat, 4; number of patients to Dr Gray's office, 7; number of dressings, 8; number sent to hospital, 1. Patients classified as to departments: Office, 6; burling, 36; weaving, 34; joining, 17; filling, 15; spinning, 14; gieging, 1; finishing, 1; machine, 6; wool room, 7; card room, 6; wash room, 2; store room, 3; dry room, 1; filtration, 1; cop, 3; dressers, 1; warping, 1; fireman, 1; coal p., 2; shipping, 2; carpenter, 2; cloth, 2.

Obstetrical Report.—Number of clinics held, 3; number of new patients attending, 2; number of old patients attending, 6; total number of patients carried over from last month, 3; discharged to Brady Hospital, 0; discharged, not pregnant, 1; confined at home, 2; total number discharged, 3; number of patients receiving prenatal care, 5.

Tuberculosis Report.—Number of new patients, 9; number of old patients, 316; total, 325. Source—dispensary, 8; nurses, 0; board of health, 0; physicians, 0; other sources, 1; number of calls made, 74. Disposition of cases—sent to hospitals, 7; returned from hospitals, 3; died, 0; discharged, 0; carried over into next month, 384; number assisted with milk and eggs, 1. Clinics: Number of clinics held (children's lungs), 2; (obsv.), 4; number of new patients attending, 8; number of old patients attending, 54; total, 62; number of prescriptions put up, 1.

THE BENDER HYGIENIC LABORATORY announces post-graduate instruction, the classes beginning November 4, 1920, the courses to be limited to men holding the M. D. degree. Although primarily pathologic studies, clinical material will be introduced when possible. The following studies are contemplated and will be held providing a sufficient number of men register to justify the course: Surgical Pathology, Diseases of the Gastro-Intestinal Tract, Diseases of the Heart and Kidney, Tumors, Diseases of the Blood, Laboratory Technic.

Meetings will take place each Thursday afternoon at four o'clock. Address inquiries to Ellis Kellert, M. D., Director.

THE AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY.—The first issue of the *American Journal of Obstetrics and Gynecology* has been issued to take the place of the *American Journal of Obstetrics and Diseases of Children* which discontinued publication in February.

The new journal is published by the C. V. Mosby Company of St. Louis.

THE MEDICAL REVIEW OF REVIEWS announces the inauguration of a new department for the advancement of the science of Chemo-Therapy.

In order to develop the theories as set forth by the various investigators who have thus far entered this field, the cooperation of all physicians, chemists, bacteriologists and pharmacologists who are doing or contemplate doing work along these lines is invited.

TRAINING NATIVE NURSES FOR HAITI.—The nurses' training school for native Haitian women was established in connection with the Municipal Hospital at Port-au-Prince under the direction of nurses connected with the U. S. Navy. Recently, however, the terms of service of these nurses expired, and the school was left without supervision until the American Red Cross, at the urgent request of the Haitian government, sent three nurses to Port-au-Prince to continue the work.

The Red Cross selected Miss Vashti Bartlett of Gaithersburg, Md., whose Red Cross service in Russia and Siberia during the war was conspicuous, as superintendent of nurses. Miss Mary L. Griffith of Laytonsville, Md., and Miss Anna M. Hansberry of Osterville, Mass., accompanied Miss Bartlett as assistants.

In reporting conditions as she found them in Haiti, Miss Bartlett writes: "Such rags, poverty and sores I am sure you have never seen I think that we have five children in the hospital under ten, each with an eye out. Nothing could touch your heart more than these youngsters who even with a bandage over their eyes sit all day with their heads on a table, trying to keep out the light. We also have two cases of leprosy. I have never seen such pathetic children in all my life."

VIENNA'S VITAL STATISTICS.—With the assistance of the Austrian Government, the American Red Cross Commission in Vienna has compiled statistics which show that while in 1912 the birth rate was 19.1 per 1,000

and the death rate 15.4, in 1919 these rates were respectively 13.1 and 22.3. The death rate from tuberculosis has doubled, as has that from other infectious diseases.

The following table gives the non-military causes of deaths from 1912 to 1919:

	1912	1913	1914	1915	1916	1917	1918	1919
Diseases of the Respiratory Organs.....	9,059	9,231	8,946	9,889	10,297	12,644	17,452	12,893
Malnutrition and Debility.....	3,762	3,599	3,607	3,651	3,628	4,876	4,914	5,066
Communicable Diseases.....	1,268	1,518	1,196	1,777	1,157	792	1,142	814
Heart and Circulation Diseases.....	4,612	4,603	4,824	4,895	5,262	6,398	6,380	6,621
Stomach and Intestinal Diseases.....	2,102	2,188	2,046	1,768	1,488	2,602	2,556	2,041
Cancer and new Growths.....	2,869	2,903	2,975	2,891	3,045	2,936	2,614	2,613
Diseases of Brain and Meningitis.....	1,013	1,034	865	1,072	1,057	988	986	1,033
Tuberculosis of Bones and Glands.....	708	645	609	651	718	829	905	1,184
Diseases of the Liver.....	259	243	232	232	260	189	155	134
Diseases of the Kidneys.....	769	664	728	730	754	860	879	833
Other causes of Death.....	4,805	4,789	4,805	4,963	5,331	6,810	5,873	5,623
Suicide.....	742	731	646	533	498	439	429	638

Total Deaths in Vienna... 22,968 32,148 31,479 33,252 33,495 40,363 44,185 39,513

This table indicates that cancer, kidney and stomach diseases have remained nearly stationary since the last peace year, that diseases of the liver have grown less with the lessening of food, and that contagious diseases have diminished with the closing of means of communication between Vienna and the outside world.

Suicides, contrary to the impression quite generally held in other lands, has not increased. Newspapers in Vienna and other cities have featured the desperation of the middle classes of Vienna, who, having sold their last valuables to obtain bread, have chosen self-destruction as a quick escape from their misery; of women, who driven to dishonor by want, have killed themselves rather than endure their shame. The number of suicides has not risen, rather there has been a slight decline in the rate. In 1913 there were 2.9 suicides, per thousand inhabitants; in 1919, there were 2.8 suicides per thousand.

VIENNA'S STARVING CHILDREN.—The American Relief Administration, preliminary to undertaking its work of giving a noon meal six days a week to the school children of Vienna, made a medical examination of 207,000 of its prospective wards. As a result of this examination they separated the school children of the Austrian capital into four categories of health, as follows:

Sufficiently nourished	7,000
Undernourished	20,000
Badly undernourished	83,000
Badly undernourished and diseased	97,000

Of 58,849 children examined at Dr. von Pirquet's infirmary during 1918, only 4,637 were judged to be of satisfactory health.

These figures give an indication of what the Viennese children have suffered during and since the war. But only an indication. To realize

thoroughly what their slow starvation has meant, one must have attended the clinics, or have seen the lines of waxy skinned, too-big-eyed children waiting for their dinners, cup in hand, patient and unmischievous to an extent that hurts you, because they have no surplus of vitality left to create disorder.

The poor and the middle classes of Vienna, who cannot afford to pay the enormous prices at which the rich have been able to obtain what food is smuggled into the city illegally, are all in the same boat. They are all slowly starving. The necessary food minimum to maintain vitality is about 2,000 calories per capita per day. Last spring Vienna's daily ration, according to a schedule furnished the American Red Cross by Dr. Pirquet, was as follows:

Bread	6½ ounces	360 calories
Flour	2 ounces	180 calories
Sugar	1 ounce	98 calories
Potatoes	2¼ ounces	60 calories
Fat	⅔ ounce	152 calories
Beef	½ ounce	24 calories
Horse flesh	⅓ ounce	6 calories
<hr/>		<hr/>
Daily total	13 ounces	880 calories

The children's hospitals of Vienna, when they appealed last May to the American Red Cross for edible oils, stated that 70% of their cases could be cured and discharged if they could obtain an adequate supply of fats. And the American Red Cross, working in conjunction with other relief agencies, has done much to alleviate the suffering, especially among the children. But there is still so much suffering that what little has been accomplished seems only a drop in the bucket.

TYPHUS RESEARCH HOSPITAL IN POLAND.—At the request of the League of Red Cross Societies a large typhus research hospital will be operated in connection with the new American Red Cross hospital recently established in Wilno under the direction of Major F. W. Black. Major Black, who has been in Poland since the armistice, was with the A. E. F. during the war.

For two years past hospitals in northern and eastern Poland have been flooded with typhus patients. In localities where hospitalization was inadequate, as in Galicia, whole villages have been wiped out. In Brest-Litovsk, where thousands of war prisoners have been crowded into barracks, there has been an enormous death rate.

In the light of the scale on which typhus is now sweeping Russia, it is believed that modern medical science will be hard pressed to prevent a world-wide plague, extending perhaps to western Europe and America.

RED CROSS WORK IN POLAND.—Recent developments in Poland have brought sharply to public attention the fact that the American Red Cross has been an important factor in all relief work in Poland, ever since American workers were able to offer their assistance. An official statement just issued from National Headquarters reveals the vast extent of its operations, of which the following table will give some idea.

Hospitals aided	372
Orphanages aided	341
Other institutions aided	237
Patients treated	60,286
Orphans cared for	23,070
Orphans clothed	80,100
Civilians aided	719,380
Soldiers aided	327,250
Total persons aided	1,210,086
Financial aid including Chapter-produced articles	\$5,054,000

These figures were compiled prior to August 1, and do not therefore take into account the many wounded and refugees cared for since the heaviest fighting began.

From a personnel of 45 workers, which arrived in Warsaw in March, 1919, accompanied by 50 cars of supplies, the work grew until at its height there were 500 workers, 275 of whom were Americans. The work, particularly in combating typhus, was of the utmost importance.

On August 17 it was reported from Paris, the European headquarters of the Red Cross, that there were still 35 American Red Cross nurses in Poland, mostly at Cracow, where thousands of wounded soldiers were overcrowding the hospitals.

PERSONAL.—Dr. SAMUEL S. HANCE (A. M. C., '54) celebrated his ninety-fifth birthday at his home in Fairport, N. Y., on July 1, 1920. Dr. Hance practiced for many years in Minneapolis, Minn., and when he retired from active work returned to his old home in Fairport, N. Y.

—Dr. JOHN M. GRIFFIN (A. M. C., '01) announces the opening of offices in the Glens Falls Insurance Company Building, Glens Falls, N. Y., where his practice will be limited to diseases of the ear, nose and throat.

—Dr. PETER J. HIRST (A. M. C., '10), who for many years has been superintendent of the Saratoga County Tuberculosis Hospital in the town of Providence, has resigned to accept a similar position at the Herkimer County Tuberculosis Hospital.

MARRIED.—Dr. MARCUS A. CURRY (A. M. C., '04) and Miss Myrtle Frances Smart were married at Greystone Park, N. J., on Saturday, October 16, 1920. Dr. Curry is Medical Superintendent of the State Hospital at Morris Plains, N. J.

DIED.—Dr. CHARLES T. WEBB (A. M. C., '52) died at Davenport, Ia., September 8, 1920, of pneumonia, aged 94.

—Dr. THOMAS R. FEATHERSTONHAUGH (A. M. C., '77) died at Duanesburg, N. Y., October 27, 1920.

Dr. LEMON THOMSON (A. M. C., '82) died suddenly at Glens Falls, N. Y., September 15, 1920, aged 63.

In Memoriam

WALTER W. SCOFIELD, M. D.

Dr. WALTER W. SCOFIELD, died at his home in Dalton, Mass., on July 6, 1920, after an illness of fifteen months. His death was said to be due to a "general breakdown" after years of strenuous work in a wide territory in the Berkshire hills.

Dr. Scofield was born in Westerlo, Albany County, N. Y., May 13, 1854. He attended Rensselaer academy, a preparatory school there, and later the Albany Normal School, now the New York State College for Teachers. He graduated from the Albany Medical College in 1882 and after serving in the Albany Hospital for eighteen months went to Dalton in the fall of 1883, where he followed his profession with marked success, showing marked activity, interest in his patients and in the affairs of the community, and giving his strength and time unstintingly in response to any call made upon him.

On January 29, 1884, he married Miss Charlotte A. Wands of New Scotland, N. Y. He was an active member of the Dalton Methodist Church, of the Unity Lodge of Masons, the American Medical Association, the Medical Society of the State of Massachusetts, the Berkshire District Medical Association, of which he was President for two years, and he was also an honorary member of the Phi Sigma Kappa.

He had served as delegate to the Medical Society of the State of New York, and had been a trustee of the Massachusetts State Hospital for Epileptics for ten years. He was particularly interested in the annual reunions of the Alumni Association of the Albany Medical College and served as its president for one year. In his report to his class at the Decennial Reunion of 1912 he modestly stated that he had prospered financially, had been able to travel abroad, and to assist his son to his education in Williams College and in the Massachusetts Institute of Technology, and that he had accumulated property for the consolation of possible old age and infirmity.

He is survived by his widow, a son, Walter W. Scofield, Jr., of Trenton, N. J., a brother, Ransom Scofield of New Baltimore, N. Y., and a sister, Mrs. Henry Wert of Battle Creek, Mich.

Current Medical Literature

NEUROLOGY.

Acrocephaly and Scaphocephaly with Symmetrically Distributed Malformations of the Extremities.

PARK and POWERS. *American Journal of the Diseases of Children*, 1920, XX, 235.

In 1906 Apert first reported what he considered an entity, acrocephaly with syndactylism. Park and Powers have investigated cases of malformation of the skull sometimes associated with syndactylism and have come to the conclusion that the case reported by Apert cannot be considered as an entity, but that it is only one of the very many variations of skull malformation associated with changes of the extremities. They report a case of acrobrachycephaly with malformation of the extremities from the Department of Pediatrics of Johns Hopkins University and have culled from the literature twenty-five other cases somewhat analogous to their own. Clinically their case showed a high, short, and broad head with a flat occiput, protruding and oblique eyeballs, and complete bilateral fusion of the fingers and toes. The authors cannot hold with Verchow that the cause of the skull deformities is a premature synostosis secondary to an inflammatory involvement of the membranes. They believe that the origin of the deformity is in the germ plasm and quote three cases of oxycephaly reported by Bedell in the same family (*Jour. Amer. Med. Assn.*, 1917).

The paper is carefully written with a report of the single case and with an extensive review of the literature of all the theories suggested to account for this rare condition. There are some excellent illustrations by Brödel.

HENRY VIETS.

The Effect of Salt Ingestion on Cerebro-Spinal Fluid Pressure and Brain Volume.

FOLEY and PUTNAM. *American Journal of Physiology*, 1920, LIII, 464.

The cerebro-spinal fluid pressure changes following injection of salt solution into the blood stream were first investigated by Weed and McKibber working at the army Neuro-surgical Laboratory at Baltimore and reported in the *American Journal of Physiology* for 1919. Their work was done upon etherized cats, and they found that after intravenous injection of Ringer's solution the spinal fluid pressure was fairly constant. When a hypotonic solution (distilled water) was injected intravenously there was a marked rise in the cerebro-spinal fluid pressure and conversely when a hypertonic solution (concentrated sodium chloride) was injected intravenously there was an initial rise in the cerebro-spinal fluid

pressure followed by a marked fall. These workers noticed also that following hypertonic solution injected intravenously there was a marked decrease in the size of the brain and conversely following the hypotonic solution there was a marked increase in the size of the brain. Foley and Putnam have confirmed this work of Weed and McKibber by their results at the Laboratory of Surgical Research at the Harvard Medical School. They have also found that the same effects in relation to cerebro-spinal fluid pressure and brain volume can be obtained after the ingestion of a hypertonic solution into the gastro-intestinal tract. These workers used sodium chloride and obtained their results in animals. Their work was first suggested to them by Cushing who thought that possibly the relief of the so-called "tension headaches" following the injection of salt solution (magnesium sulphate) might be explained on the basis of decrease of the brain volume. The work of Foley and Putnam would indicate that there was a marked decrease in brain volume after the ingestion of salts. Whether there is any relative increase in the salts of the blood following the ingestion was not determined. The method of reducing the brain bulk either by intravenous injection of salt solution or by ingestion of saline may be of clinical value if used to decrease the increased intracranial tension before a craniotomy for brain tumor.

HENRY VIETS.

An Early Diagnostic Sign in Basilar Meningitis.

GINGOLD. *Archives of Pediatrics*, 1920, xxxvii, 19.

Gingold calls attention to "reflex" strabismus as an early diagnostic sign in cases of basilar meningitis. He observed a bilateral or unilateral strabismus when the head was flexed on the chest. The squint disappeared when the head was relaxed. In many cases the strabismus was accompanied by a retraction of the upper eyelids; in some, by a contraction of the pupil. He found the "reflex" strabismus present in the early stage of almost every case that came under his observation in the past seven years. In the late or paralytic stage flexion of the head failed to produce a strabismus.

Gingold thinks that flexion of the neck suddenly increases the pressure at the base and that the "reflex" strabismus is either due to pressure on the abducens with paresis of the external rectus or pressure on the oculomotor nerve with spasm of the internal rectus muscle and in some cases the levator palpebrae and constrictor of the pupil. It might be noted that Cushing has pointed out that the abducens nerve is specially liable to pressure because of its long intracranial course and also because the anterior inferior cerebellar artery usually crosses it near its point of exit from the medulla.

HENRY VIETS.

A Method for the Quantitative Determination of Protein in Cerebrospinal Fluid.

DENIS and AYER. *Archives of Internal Medicine*, 1920, XXVI, 436.

The method is as follows: To 0.6 c. c. of spinal fluid is added 0.4 c. c. of distilled water and 1 c. c. of a 5 per cent solution of sulphosalicylic acid. The fluids are mixed by inversion (not shaking) and after five minutes are read by means of a suitable colorimeter against a standard protein suspension. The standard is made from human blood serum. A small model Duboscq colorimeter is used. The method is accurate within 5 per cent, is adapted to any well-equipped laboratory, and the technique easily acquired. For details the original article must be read.

HENRY VIETS.

NEW YORK STATE MEDICAL LIBRARY.

Edited by Frances K. Ray.

RECENT ACCESSIONS.

- Allen, F. M., Stillman, Edgar and Fitz, Reginald. Total dietary regulation in the treatment of diabetes. 1919. (Rockefeller inst. for med. research. Monograph no. 11.)
- Anderson, H. G. Medical and surgical aspects of aviation. 1919.
- Bailey, Harriet. Nursing mental diseases. 1920.
- Bartlett, Willard and others. After-treatment of surgical patients. 2 vol. 1920.
- Baruch, Simon. Hydrotherapy. 1920.
- Boothby, W. M. and Sandiford, Irene. Laboratory manual of the technic of basal metabolic rate determinations. 1920.
- Bram, Israel. Exophthalmic goiter and its nonsurgical treatment. 1920.
- Buck, A. H. Dawn of modern medicine. 1920.
- Burton-Fanning, F. W. Open air treatment of pulmonary tuberculosis. 1905.
- Clark, W. M. Determination of hydrogen ions. 1920.
- Collis, E. L. *ed.* Industrial clinic. 1920.
- Connecticut state medical society. Proceedings, v. 126-128, 1918-1920.
- Crossen, H. S. Operative gynecology. 2d ed. 1920.
- Darier, J. Textbook of dermatology; translated from 2d French ed. by S. Pollitzer. 1920.
- Directory of homeopathic physicians in Greater New York and vicinity. 1920.
- Gillies, H. D. Plastic surgery of the face. . . . 1920.
- Gradwohl, R. B. H. and Blaivas, A. J. Newer methods of blood and urine chemistry. 2d ed. 1920.
- Green, C. E. Cancer problem; a statistical study. 2d ed. 1912.

- Halliday, S. L. *comp.* Guide posts on the road to health (bibliography).
(N. Y. municipal reference library. Special report, no. 3.)
- Head, Henry. Studies in neurology. 2 vol. 1920.
- Hertzler, A. E. The peritoneum. . . . 2 vol. 1919.
- Higgins, C. M. Horrors of vaccination exposed and illustrated. 1920.
- Jones, Ernest. Treatment of the neuroses. 1920.
- Kelly, H. A. and Burrage, W. L. American medical biographies. 1920.
- King, J. B. S. Practical observations upon the chemistry of food and dietetics. 2d ed. 1907.
- Leavitt, F. E. Operations of obstetrics. 1919.
- Malleson, Hope. A woman doctor; Mary Murdoch of Hull. 1919.
- Marshall, F. H. A. Physiology of reproduction. 1910.
- Martin, Frederick. Manual for lispers. 1919.
- Mercur, W. H. System for indexing and classifying clinical case histories and medical literature. 1920.
- Muller, G. A. and Glass, Alexander. Diseases of the dog and their treatment. 4th ed. 1919.
- Nelson loose-leaf medicine. v. 1-3. 1920.
- Progressive medicine. v. 3. 1920.
- Proudfit, F. T. Dietetics for nurses. 1918.
- Rockefeller institute for medical research. Studies. v. 33-34. 1920.
- Smeeton, M. A. Bacteriology for nurses. 1920.
- Thresh, J. C. and Porter, A. E. Preservatives in food and food examination. 1906.
- Tilney, Frederick and Howe, H. S. Epidemic encephalitis. 1920.
- Tridon, André. Psychoanalysis: its history, theory and practice. 1919.
- Turner, C. E. Hygiene, dental and general. . . . 1920.
- U. S. Surgeon-general's office. . . . Defects found in drafted men.
Statistical information compiled from the draft records. . . . 1920.
- Webster, R. W. Diagnostic methods, chemical, bacteriological, microscopical. 6th ed. 1920.
- Wimmer, August. Psychiatric-neurologic examination methods. . . .
translated by A. W. Hoisholt. 1919.
- Yale university. School of medicine. Contributions from the Anna M. R. Lauder department of public health. v. 1. 1917-1919.

NEW JOURNAL.

International journal of public health.

ALBANY MEDICAL ANNALS

Original Communications

A REPORT OF TWO CASES OF SYRINGOMYELIA.

WITH AUTOPSY IN ONE.

BY HERMON C. GORDINIER, A. M., M. D.

It has been truthfully said that a comprehensive knowledge of the anatomy and physiology of the nervous system is essential to the correct interpretation and grouping of symptoms, as well as the localization in the central nervous system of the pathologic changes responsible for such symptoms.

Syringomyelia in its classical form, with its characteristic symptoms and pathologic changes beautifully exemplifies spinal cord localization. Starting as a central gliosis, usually in the cervical region, it extends both spinal- and cerebral-wards, involving in turn, various levels of the spinal cord and oblongata. The glia cells and fibers proliferate ventrally and dorsally, affecting not only the central gray matter with its intrinsic cells and fiber mesh, but both dorsal and ventral cornua with their intricate net of nerve fibers and cells, often at first unilaterally and then bilaterally. The symptoms excited by such slowly progressive changes are those characteristic of the spinal cord type of progressive muscular atrophy with, in addition, syringomyelic disassociation, *i.e.*, perversion, diminution and loss of temperature and pain sense, segmental or general, with preservation of tactile sense; together with vaso-motor and trophic changes of the skin, nails, bones, joints, and spine and the Horner syndrome, "cervical sympathetic paralysis."

The two cases of syringomyelia reported are classical and

illustrate very clearly the combination of symptoms above referred to which are diagnostic of central gliosis with cavitation.

CASE 1. The patient, Mr. M. A., aged 52 years, single, salesman by occupation, consulted me April 29, 1914, complaining of weakness of the hands and an inability to use the fingers in performing such fine movements as buttoning his clothes, holding a pen, grasping objects, etc. He also complained of numbness in the right upper extremity and of the fact that on several occasions, while smoking, he had burned the fingers of his right hand without being conscious of it or of any pain accompanying it.

Family History: His father died of bronchitis at the age of 72. His mother died at the age of 85 of an attack of angina pectoris. A brother died at the age of 58 of chronic Bright's disease. A sister died at the age of 40 of cancer of the breast. Otherwise the family history is negative.

Personal History: Apart from the ordinary diseases of childhood he has never been ill until the development of the present illness which began about two years ago. Twenty-five years ago he had a venereal sore and was treated for syphilis by his physician for a period of about three years. He has never since had the slightest clinical manifestation of that disease.

Present Illness: His present illness began about three years ago with a gait that was slightly weak and unsteady. Some three months after he noticed a peculiar sensation in the tips of his fingers of the right hand. This sensation was soon followed by a lack of power to properly grasp and hold objects in this hand or to button his clothes, etc. Shortly afterward the numbness extended up the forearm and arm to the shoulder, neck, and right side of the face. Six months after the onset of the numbness in the right hand, a similar numbness developed in the fingers of the left hand and extended part way up the forearm. He has gradually lost the power to execute the finer movements of the left hand or to grasp objects with it. He has noticed that the muscles of the right shoulder and right side of the neck are sore. Otherwise he has experienced no pain whatsoever. He has also observed that he is unable to distinguish with his right hand hot or cold objects, while with his left hand, he is perfectly able to recognize the slightest differences in temperature. He has noticed no imperfection of sight, hearing, smell or taste. He has no difficulty of articulating and swallows perfectly. He controls his bladder and rectum. His sexual power has diminished in the last year. His bowels are obstinately constipated, requiring a daily enema for their relief. His appetite is keen and his mind clear. He suffers from no headache and sleeps well.

Physical Examination: The patient is slightly built. He presents no edema or cyanosis and no enlarged lymph nodes.

Lungs: Apart from a moderate degree of emphysema, the lungs are normal.

Heart and Vessels: The pulse is regular. The vessel wall is easily compressed and not palpably thickened. The rate is 72 beats per minute. The jugular veins are not prominent and present no visible pulsation. The cardiac dullness begins at the fourth rib and extends from the mid-sternum to within two centimeters of the left mammillary line. The heart sounds are normal, no adventitious sounds being detectable.

Liver: The dullness is normal. The spleen is not outlined by palpation or percussion. The abdomen is symmetric, universally tympanic, and no herniae are present.

The Blood: red cell count—4,500,000; white cell count—7,000; Hgb—85%; Wass.—neg. Urine: sugar and albumen—negative; no deposit; definite indican reaction, and a few hyaline casts were found microscopically.

Nervous System: Cranial Nerves—The palpebral fissures are narrowed and both eyes are retracted. Slight double ptosis exists. This enophthalmus appears more marked on the right side. The pupils are equal, small, and react to light, accommodation and consensually. The ocular movements are normal. There is no nystagmus. The visual fields with the lids well elevated are normal to light and color. Irritation of the cervical sympathetic is without effect on the pupils. The optic discs, vessels, and retinae appear normal.

The facial and masticatory muscles functionate normally and present no fibrillation or atrophy. The tongue presents no evidences of atrophy and its movements are normal.

There is marked diminution of pain and thermic sense in the region of distribution of the right trigeminal nerve. The senses of taste, smell and hearing are normal.

The intrinsic muscles of both hands are greatly atrophied, this being more advanced in the right than in the left hand. Every now and again flickering, fibrillary contractions appear in the muscles of the forearms, triceps, biceps, pectorals, deltoids, trapezius and the supra- and infraspinati muscles of both sides. The mobility of the joints is normal and no evidence of arthropathy is present.

Sensation: All forms of sensation are preserved on the whole left side. Tactile sense is preserved but is slightly diminished over the whole right upper extremity and right side of chest and abdomen. Complete loss of pain sense (analgesia) exists of the right extremity with the exception of the right shoulder region where it is greatly diminished and perverted. There is complete loss of thermic sense over the whole right upper extremity, right side of trunk and neck. In the distribution of the right trigeminal nerve, the temperature sense is perverted, the patient often mistaking hot for cold or vice-versa, whereas, on the left side, he recognizes the slightest difference in temperatures. There is complete astereognosis in the right hand. The lower extremities show no wasting and all forms of sensations are normally preserved. The muscles are somewhat stiff and rigid, and the gait is slightly spastic-paretic. There is no Rombergism.

Reflexes: All tendon reflexes of the upper extremities are lost. The jaw jerk is present but not unusually active. The plantar reflexes are of the extensor type. The patellar reflexes are exaggerated. The tendo-Achillis jerks are lively and a beautiful ankle clonus is present. The cremasteric and umbilical reflexes are lost. The organic reflexes are controlled.

Trophic: The hands are always cold. The fingers turn white or livid. The skin covering the fingers is glossy. The finger nails are brittle and ridged longitudinally. Otherwise the skin presents no thickening, bullae, herpes, or ulcerations.

The spine shows no tenderness on percussion. There is a distinct lateral curvature involving the lower cervical and upper dorsal regions with the concavity toward the left side.

I saw this patient again in October, 1914. He was in about the same condition as above described. He showed a slight dysarthria and difficulty in swallowing. His tongue and lip movements were slightly hampered. I saw him again in June, 1915, when he was in a pitiable state. Marked bulbar symptoms had come on gradually in the interim. Now he is almost unable to swallow. His tongue could be protruded to his teeth. It was atrophied and presented fibrillary contractions, and its mucous membrane was thrown into transverse wrinkles. The lips were thinned and the muscles on the right side were greatly wasted. His pulse was rapid and feeble, and, at times, he had great difficulty in breathing. He died two months later. No post mortem examination was permitted.

CASE 2. The patient, J. C., consulted me July 1, 1915. He was 30 years of age and unmarried. He was a hotel clerk by occupation.

Family History: His father died of pneumonia. His mother died of a grave stomach trouble, probably cancer. One brother died of typhoid fever. Three died of phthisis pulmonalis.

Personal History: Eight years ago the patient had La Grippe. Otherwise he has never been sick since childhood. He denies venereal infection and there are no objective signs of syphilis upon his person.

History of Present Illness: Several weeks ago, the patient noticed a numbness of the fingers of the right hand. This numbness has extended up the arm as far as the shoulder. He has also suffered from a severe aching pain in the right shoulder and arm. Although he has noticed no marked diminution of power of the right upper extremity, he states that he can not handle or retain small objects in his right hand, nor can he button his clothes or perform any of the finer movements which the fingers of the right hand perform.

He can not distinguish with his eyes closed the character of objects held in his right hand. He also noticed a similar, although less marked, defect of his left hand. He has perfect control of the bladder and rectum. He has noticed no change in his vision. He has expectorated for more than a year a thick sputum without apparent cough. He has no pain in

the back or spine, but has a feeling of pressure in the right shoulder and arm, and a band-like constriction around it.

He stated that about a week ago while opening a champagne bottle which accidentally broke, his right wrist was severely cut without exciting the slightest pain. This experience was to him unusual and unexplainable and so led him to consult me to ascertain, if possible, the cause of the peculiar incident.

Physical Examination: Cranial Nerves: Both eyeballs are retracted, the left being more so than the right. The palpebral fissures are narrowed. Rotation of the eyeballs is normal. The pupils are small and equal and react to light and accommodation and consensually. Irritation, however, of the cervical sympathetic fails to cause the slightest dilatation of either pupil. The optic discs are normal. Both sides of the face are of a dusky red color. There are no subjective or objective sensory disturbances over either side of the face, scalp or neck. No facial asymmetry. The tongue is protruded in the median line and presents no tremor or atrophy. There is no dyspnoea, dysarthria, or dysphagia and no loss or perversion of the sense of smell or taste.

Right Upper Extremity: The interossei and muscles of the ball of the thumb are very much wasted and present fine fibrillary twitchings which also involve the muscles of the hand, forearm, arm and shoulder. The deltoid, lower part of the trapezius and the supra- and infra-spinati muscles show distinct fibrillation and atrophy. There is a complete loss of thermal and pain sense over the dorsal and palmar surfaces of the fingers, hand and lower half of the forearm. There is complete astereognosis. The right hand is fast assuming the claw type. There is a marked perversion of temperature sense as well as a diminution of pain sense of the right arm and shoulder. The right hand is much colder than its fellow. Irritation of the skin of the right side by a sharp instrument causes marked dilatation of the cutaneous vessels. Muscular irritability is increased over the right side. All movements of the right upper extremity are much limited. Tactile sense is preserved.

Right Leg: There are complete analgesia and thermic anesthesia of the right foot and leg as high as the knee, with distinct diminution of the same over the front and back of the right thigh. The right lower limb is much smaller than the left. There is complete preservation of the tactile sense over the right side. The muscles of the right leg and foot show the mixed reaction of degeneration.

Left Upper Extremity: Beginning atrophy of the intrinsic muscles of hand exists, interossei and those of the ball of the thumb, associated with analgesia and beginning thermic anesthesia of the fingers and dorsal and palmar surfaces of the hand. The remainder of the left forearm and arm shows marked diminution of pain and thermic sense without decided loss of same.

Left Lower Extremity: The left lower extremity presents no muscular wasting and all sensations appear normal.

Reflexes: The tendon reflexes of the upper extremity are absent. The patellar-tendon and Achilles tendon reflexes are present, but much diminished. There is a slight plantar flexion. The triceps and wrist tendon reflexes are lively on the left side and the patellar-tendon reflexes are exaggerated, but no foot or patellar clonus is present. There is a distinct lateral curvature in the thoracic region with the concavity toward the left side of the spine and no trophic disturbances of the joints.

April 1, 1915, the patient consulted me again when a careful examination showed very little change in his condition from his former visit, save that the condition of his left arm had progressed so that atrophy exists of the muscles of the shoulder girdle. The left leg remains uninvolved.

January, 1916, he developed a double lobar pneumonia and lived but five days. I was only permitted to examine the spinal cord.

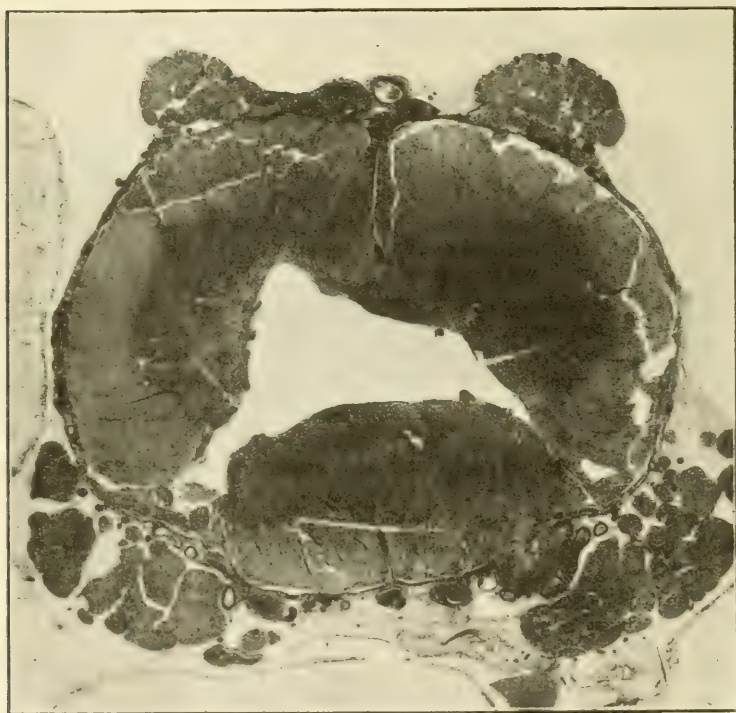


FIG. 1.—A transverse section of the spinal cord at the level of the fourth lumbar segment showing the large, clear, irregular syringomyelic cavity with destruction of the central gray matter bases of the anterior and most of the posterior cornua.

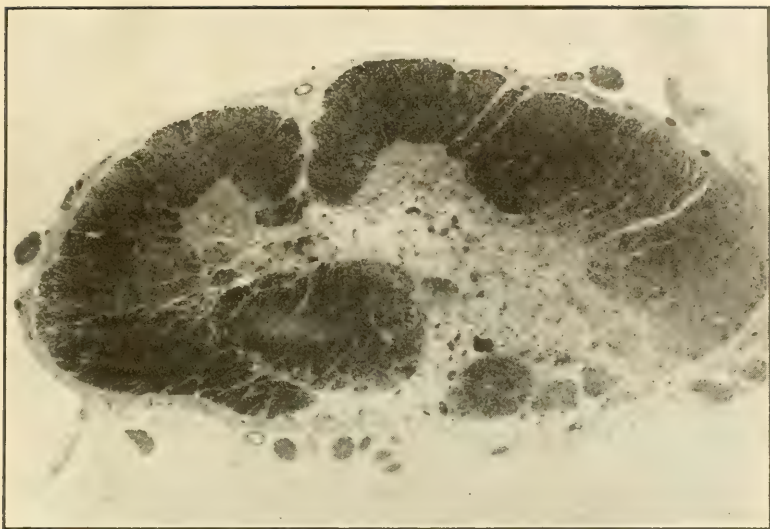


FIG. 2.—A transverse section of the spinal cord at the level of the fourth cervical segment. Note the glia proliferation, beginning cavitation, destruction of the central gray matter, ventral and right dorsal cornua and enlargement of the right half of the cord.

Autopsy: The spinal cord was surrounded by the usual amount of cerebro-spinal fluid. There were no adhesions. It was removed without difficulty. Its consistency is rather firm; it is broadened laterally and flattened antero-posteriorly. The cord is hardened in Orth's fluid. On section, a single cavity is disclosed, irregular in outline and divided into two or three compartments by dense bands of glia tissue. It occupies a larger part of the right than of the left half of the gray matter. The cavity decreases gradually in size from above downward extending from just above the first cervical segment to the upper lumbar cord. Sections from various levels of the cervical, dorsal, lumbar and sacral regions are stained with hematoxylin and eosin, nigrosin Van Gieson and Weigert-Pal stains. The cavity attains its greatest size at the levels of the fourth cervical segment and decreases in size spinalwards until it is lost at about the level of the second lumbar segment. In the cervical region the cavity occupies a greater part of the right than the left half of the grey matter destroying the central grey matter with its intrinsic cells and fiber net; not a single strand of the fibers of the ventral or dorsal commissures is present. The whole right posterior horn and most of the left; the bases of the lateral and ventral cornua are destroyed by encroachment and cavitation. The ventral cornual cells are rarely to be seen and those

remaining are atrophic and show advanced degenerative changes. A few normal cells are observed in the extreme ventral parts of the anterior horns. Most of the ventral nerve roots remaining show atrophic changes. The cells of the posterior ganglion cells are normal. The vesicular cells of Clarke's columns are destroyed. Sections of the dorsal cord show similar destructive changes to those found in the cervical region. The upper lumbar cord on section shows a distinct irregular cavity without compartments occupying the same general position as in the cervical and dorsal regions, with its greatest size in the right half of the grey matter extending into the left half and causing almost complete destruction of the right posterior horn and partial destruction of the left together with the bases of both anterior horns. The white columns show definite degeneration with neuroglia replacement in the ventro-lateral and dorsal lateral ascending tracts of Gowers and Flechsig, most marked on the right side. No evidence of the fibers of the cornua, commissural or the comma tracts is present. The right and left septo-marginal tracts are degenerated. Both crossed pyramidal tracts show slight degenerative changes.

Clinical and Pathological Notes

Fracture of the Tarsal Scaphoid with Dorsal Dislocation of the Major Fragment. Detailed Report of Case No. 27. By
WILLIAM P. HOWARD, M. D.

From the Roentgen Ray Department, Albany Hospital

Mr. S. W. L., age 31, traveling salesman, was admitted to the Albany Hospital, July 24, 1920.

The patient states that on the previous evening (July 23,) at 10.30 o'clock, he was locked in a local club house through an oversight of the janitor. In order to get out the patient had to drop ten feet from an open window. The window chosen is on the south side of the building facing on a steep hill, the greatest street elevation being to the west.

As the man dropped he faced the building, the outer side of the left foot striking the side walk first. The foot did not turn but he felt something give and experienced very sharp pain.

PHYSICAL EXAMINATION: The foot is swollen, oedematous and somewhat cyanotic. An area of ecchymosis is visible anterior to the internal malleolus. In the region of the scaphoid there is a prominence which is hard, very tender and not movable. All motions of the foot are decidedly restricted by muscle spasm.

X-ray, July 24, shows a fracture with dorsal dislocation of a portion of the bone.

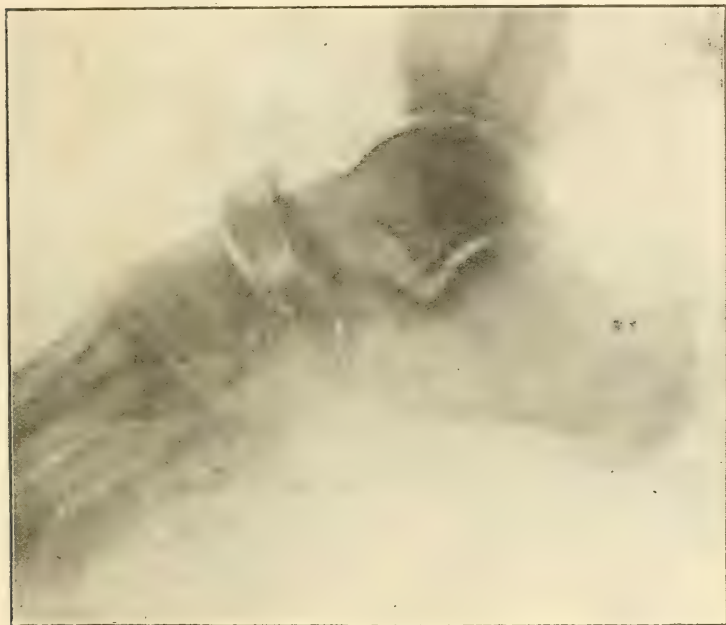


FIGURE 1. RADIOGRAM TAKEN JULY 24, 1920

TREATMENT: On the afternoon of July 24th, preparation for open reduction having been made in the event that manipulation failed, the patient was etherized. When the stage of muscular relaxation had been reached, the dislocation was easily reduced by plantar flexion, adduction of the anterior portion of the foot combined with pressure over the prominence. Any attempt to place the foot in a position at right angles to the leg immediately reproduced the dislocation. The reduction could be maintained only when the foot remained in a position of equino-varus. Accordingly a cast was applied, with the foot in this position, extending from the toes to just below the knee.

X-ray, October 29th, showing end-result. Generalized atrophy of bones of foot due to immobilization.



FIGURE 2. RADIOGRAM TAKEN OCTOBER 29, 1920

After four weeks the cast was removed. By manipulation, exercise and massage the varus deformity was quickly overcome, disappearing in three days. The shortening of the Achilles tendon was more obstinate, however. Full dorsiflexion of the range of the uninjured foot was not regained until October 30th.

On September 24th a plaster model of the injured foot was made and a Whitman brace fashioned from this model supplied the patient on October 4th. After fitting the brace in his shoe, the patient was allowed to walk, bearing full weight. By October 25th, he was walking without discomfort and on November 1st, 1920, he resumed the duties of his former occupation. (Antero-posterior views are on file at the hospital.)

Reports from the ROENTGEN RAY DEPARTMENT of the ALBANY HOSPITAL.

Reported by

JOHN M. BERRY, M. D.

Following is an outline report of the cases presented at the third and fourth X-ray Conferences, held at the Roentgen Ray Department of the Albany Hospital. A report of the first and the second conference was published in the ALBANY MEDICAL ANNALS for September, 1920.

Case No.	Clinical Diagnosis	X-ray Diagnosis	Revised Diagnosis	Remarks
16	Ulcer of stomach.	Carcinoma of stomach.	-Operation- Carcinoma of the stomach.	
17	Frontal sinus disease.	Frontal sinus disease.	-Operation- Pus in frontal sinus.	
18	Left frontal sinus disease case	Left frontal sinus disease.	-Operation- No disease found.	The X-ray diagnosis of left frontal sinus disease seemed very definite, and on reexamination of the plates no explanation of the mistake can be found.
19	Chronic intestinal obstruction, probably caused by malignant growth.	New growth in cecum.	-Operation- Carcinoma of cecum.	X-ray diagnosis made on the constant finding of a filling defect in the cecum.
20	Dilated stomach.	Ulcer of stomach. Pyloric obstruction.	-Operation- Old contracted ulcer of stomach.	
21	Carcinoma of stomach.	Carcinoma of stomach.	-Operation- Carcinoma of stomach.	

Case No.	Clinical Diagnosis	X-ray Diagnosis	Revised Diagnosis	Remarks
22	Questionable stone in the urinary tract.	Stone in the ureter.	-Operation— Stone removed.	In conjunction with this case an X-ray plate was shown which showed a shadow in the region of the ureter resembling a stone but which was shown to be outside the ureter (probably a phlebolith) by the passage of a lead catheter.
23	Esophageal obstruction.	Spasmodic stricture of esophagus.		The patient had had periodic attacks of difficulty in swallowing. Present attack had lasted several days. The stricture is complete. The esophagus relaxed and the barium mixture passed into the stomach while the patient was being fluoroscoped.
24	Questionable tuberculosis of the lungs following influenza.	Tuberculosis of the lung.	Tuberculosis of the lung. Tubercule bacilli found in sputum.	As early as November 1918, an X-ray plate suggested tuberculosis. In May 1920 the sputum was positive for tuberculosis.
25	Tuberculosis of the lung.	Tuberculosis of the lung.	Tuberculosis of the lung.	Both of these cases were nurses in training who had had negative X-ray plates at an earlier date. The cases illustrated the value of having a normal plate on a patient for comparison. Together, with the above two cases chest plates of two nurses were shown which were somewhat suggestive of early tuberculosis but no clinical tuberculosis had developed in two years of training.
26	Tuberculosis of the lung.	Tuberculosis of the lung.	Tuberculosis of the lung.	

27	Traumatism of foot.	Fracture dislocation of scaphoid of foot.	Reported because of the unusual injury and good result.
28	Questionable.	Stone in the kidney.	Large stone in kidney. The X-ray made a diagnosis in this case which was unexpected—there had been no symptoms suggesting stone in the kidney but blood and pus had been found in the urine.
29	Pyloric ulcer.	Ulcer of cap.	—Operation— Duodenal ulcer. The X-ray diagnosis in this case was based on the finding of an increased peristalsis—an inability to visualize the cap and a six hour retention in the stomach.
30	Questionable.	Carcinoma of stomach and pylorus.	—Operation— Inoperable carcinoma pyloric end of stomach. In this case the clinical history was almost negative. Patient complained of vomiting about once every two weeks. There would be pain in the stomach but in between attacks there would be no digestive disturbance, or trouble of any kind. There was no loss of weight. This is an excellent example of a fact frequently observed—viz—The absence of severe symptoms in malignancy of the stomach.
31	Intestinal obstruction.	Neoplasm or tuberculous at the head of the cecum with free fluid in the peritoneal cavity.	—Operation— Gangrenous appendix. In this case there was a misleading history, an unusual course of the disease and a misinterpretation of the X-ray findings.

Case No.	Clinical Diagnosis	X-ray Diagnosis	Revised Diagnosis	Remarks
32	Intestinal obstruction	Sigmoiditis or a new growth in the sigmoid, producing obstruction.	-Autopsy. Gall bladder ulcerated into the hepatic flexure, was given the intestine filled by large gall stone acting as ball valve in sigmoid.	The patient did have a sigmoiditis. When a barium enema was given the intestine filled by large gall stone floated out of the constriction and the rectum overshadowed the constricted area. When barium was given by mouth the intestine back of the constriction was dilated and the barium passing gradually through the constricted area and filling the rectum but slightly exposed the involved loop of the sigmoid to full view. This case showed the value of examining the large bowel by giving the barium by mouth as well as by enema. The findings from the enema alone were misleading. The gall stone was very light-weight, floating in water and cast no shadow in the X-ray.
33	Questionable.	Fluid in right chest.	Enlarged heart. No fluid in chest. Confirmed by second X-ray.	The error in the first X-ray diagnosis was discovered in taking another picture. Apparently the patient had shrugged one shoulder and turned slightly just as the picture was snapped and the consequent blurring of one chest gave the impression of fluid in the chest.

34	Negative chest.	Tuberculosis at right base	Negative chest confirmed by second X-ray.	The appearance on the X-ray plate which led to a diagnosis of tuberculosis was found to be due to an emulsion defect. Diagnosis cleared by a second plate.
35	Unresolved pneumonia base of right lung.	Tuberculosis at base of right lung, apices clear.	Tuberculosis of lung. Confirmed by positive sputum.	
36	Negative chest.	Marked mottling of both lungs.	Diagnosis not proven.	In this case there was a question as to whether the condition present was tuberculosis, syphilis or metastatic growth. The diagnosis was not made but the plate was shown on account of the unusual appearance.

Public Health

Edited by Arthur Sautter, M. D.

DEPARTMENT OF PUBLIC SAFETY, BUREAU OF HEALTH, ALBANY, N. Y.

COMPILED BY WILLIAM F. FULLGRAFF, REGISTRAR.

BUREAU OF VITAL STATISTICS.

DEATHS FOR THE MONTH OF OCTOBER, 1920

Consumption.....	4	Cancer.....	19
Whooping Cough.....	0	Accidents and Violence.....	2
Diarrheal Diseases.....	2	Cebro spinal men. Epidemic.....	0
Dysentery.....	0	Deaths under one year.....	16
Pneumonia.....	3	Deaths over 70 years.....	31
Broncho Pneumonia.....	5	Death rate.....	12.48
Bright's Disease.....	9	Death rate less non-resident.....	9.82
Apoplexy.....	12		

Deaths in Institutions

	Non-Res.	Res.		Non-Res.	Res.
Maternity Hospital.....	0	8	Home for the Aged.....	0	1
Albany Hospital.....	7	6	St. Margaret's Home.....	1	1
Pine Hills Sanitarium.....	1	0	Hospital for Incurables.....	0	1
St. Peter's Hospital.....	6	6	Homeopathic Hospital.....	2	5
Public Places.....	2	2	Albany Co. Hospital.....	1	2
Albany Hospital T. S. Camp.....	1	1	Births.....		180
			Stillborn.....		8

DIVISION OF COMMUNICABLE DISEASES

Typhoid Fever.....	7	Tuberculosis.....	20
Scarlet Fever.....	1	Mumps.....	2
Diphtheria and Croup.....	21	Pneumonia.....	20
Chickenpox.....	5	Influenza.....	1
Smallpox.....	0	Puerperal Septicaemia.....	1
Measles.....	14		
German Measles.....	0	Total.....	135
Whooping-cough.....	43		

Number of days quarantine for scarlet fever:

Longest.....	30	Shortest.....	30	Average.....	30
--------------	----	---------------	----	--------------	----

Number of days quarantine for diphtheria:

Longest.....	20	Shortest.....	16	Average.....	18
--------------	----	---------------	----	--------------	----

Fumigations:

Rooms.....	58	In.....	15	Buildings
------------	----	---------	----	-----------

Milk bottles disinfected.....	59
-------------------------------	----

Communicable Diseases in Relation to Schools

	Reported D. S.F. M.		
Public School No. 1.....	..	..	4
Public School No. 2.....	3	1	..
Public School No. 4.....	1	..	..
Public School No. 6.....	1	..	..
Public School No. 7.....	2	..	..
Public School No. 19.....	2	..	..
Public School No. 21.....	1	..	..
High School.....	1	..	..
St. Joseph's Academy.....	2	..	..
Cathedral School.....	..	2	..

MISCELLANEOUS

Cards posted for communi- cable disease.....	24	Vaccination dressings.....	530
Cards removed.....	9	Children examined for em- ployment certificates.....	42
Notices served on schools....	82	Number of employment cer- tificates issued.....	41
Notices served on stores and factories.....	11	Taking specimens of blood for Wassermanns.....	1
Postal card returns sent to doctors.....	24	Taking smears for Gonococci.	0
Postal card returns received from doctors.....	9	Postal cards sent to milk dealers.....	19
Inspections and reinspections	36	Dogs examined for rabies....	1
Vaccinations.....	69	Dog re-examined for rabies..	1

Tuberculosis

Living Cases on record October 1, 1920.....	666		
Cases reported:			
By card.....	20		
Dead Cases by Certificate.....	1	21	
			687
Dead Cases previously reported.....	3		
Dead Cases not previously reported.....	1		
Removed.....	9		
Died out of town.....	0		
Recovered.....	0		
Unaccounted for.....	0	13	
Living cases on record November 1, 1920.....	674		
Total Tuberculosis Death Certificates.....	4		

Non-resident deaths:

Albany Hospital Camp.....	1	1
Resident deaths.....		3
Visits to cases of tuberculosis.....		190
Miscellaneous visits.....		44
Visits to physicians.....		11

LABORATORY REPORT

Diphtheria

Initial Positive.....	47	Unsatisfactory.....	30
Initial Negative.....	292		
Release Positive.....	117	Total.....	894
Release Negative.....	408		

Sputum for Tuberculosis

Positive.....	32	Unsatisfactory.....	0
Negative.....	125		
		Total.....	157

Widals

Positive.....	7	Unsatisfactory.....	4
Negative.....	18		
		Total.....	29

Meningococcus

Positive.....	0	Negative.....	0
		Total.....	0

Wassermann tests.....	304	Gonorrhoea Examinations...	106
(positive 60)		(positive 36)	
Milk Analyses.....	179	Miscellaneous examinations.	22
Water Analyses.....	0		
Pathological Examinations..	0	Total Examinations.....	1,691

HEALTH PHYSICIANS' REPORT

Cases assigned.....	46	Calls made.....	116
---------------------	----	-----------------	-----

DIVISION OF SANITATION

Complaints.....	47	Garbage collected from 1st.	
Inspections.....	62	District.....bbls.	450
Plumbing.....17		Garbage collected from 2nd.	
Sanitary.....45		District.....bbls.	390
Reinspections.....	30	Garbage collected from 3rd.	
Plumbing.....6		District.....bbls.	590
Sanitary.....24			

HEARINGS

Hearings.....	1	Cases heard.....	1
---------------	---	------------------	---

Class of Cases

Plumbing.....	1
---------------	---

Disposition of Cases

Reinspection.....	1	Abated.....	0
-------------------	---	-------------	---

DIVISION OF PLUMBING, DRAINAGE AND VENTILATION

Inspections.....	109	Smoke.....	0
Old Houses.....	78	Blue or red.....	3
New Houses.....	31	Peppermint.....	4
Plumbing.....	59	Water test.....	11
Building.....	5	Houses examined.....	25
Plans submitted.....	5	Re-examined.....	61
Old buildings.....	1	Valid.....	13
New buildings.....	4	Without cause.....	12
Houses tested.....	18	Violations.....	0

REPORT OF REMOVAL OF DEAD ANIMALS

Horses removed.....	10	Cases of eggs removed.....	94
Dogs removed.....	11	Fish removed.....bbls.	$\frac{1}{2}$
Cats removed.....	13		
Total.....	34		

DIVISION OF MARKETS AND MILK

Public market inspections...	19	Milk cans inspected.....	249
Market inspections.....	110	Milk cans condemned.....	0
Fish market inspections.....	10	Lactometer readings.....	112
Fish peddler inspections.....	0	Temperature readings.....	112
Slaughter house inspections...	0	Fat tests.....	0
Rendering establishment inspections.....	0	Sediment tests.....	95
Pork packing house inspections.....	2	Chemical tests.....	0
Hide house inspections.....	0	Cows examined.....	1723
Milk depots inspected.....	46	Cows quarantined.....	3
Stores inspected.....	15	Cows removed.....	20
Dairies inspected.....	155	Complaints investigated.....	0
		Milk houses inspected.....	155

Medical News

THE ALBANY GUILD FOR PUBLIC HEALTH NURSING.—REPORT FOR NOVEMBER, 1920.—Number of new cases this month, 220; classified economically: free, 78; bed cases, 17; prenatal, 5; Dispensary soc. service, 16; tuberculosis, (pos.), 6; Tuberculosis (super), 6; Hospital Social service, 12; Venereal social, 16; paid 142; limited means—bed cases, 57; metropolitan bed cases, 52; Metropolitan prenatal, 17; industrial bed cases, 11; industrial social cases, 5; Western Union, 0. Cases carried over from last month, 694; bed cases, 106; prenatal cases, 30; dispensary social service, 2; tuberculosis (total), 384; hospital social service, 25; venereal, 147; industrial, 0; Western Union, 0. Classification of bed cases: Medical, 92; surgical, 6; obstetrical, 25; prenatal, 22; confinements, 22; maternity, 3; miscarriages, 0; number of babies born, 27.

2. *Visits for Nurses.*—All departments, 1,432; for bed care, 834; prenatal instruction, 35; tuberculous (super. and inst.), 82; venereal diseases instr., 70; general social service, 164; hospital social service, 53; for other purposes, 100; dispensary social, 20; supervision, 74.

3. *Source of Nursing Cases.*—Metropolitan agents, 59; doctors, 65; nurses, 2; dispensary, 1; family or friends, 8; other sources, 13.

4. *Disposition of Bed Cases.*—Discharged recovered, 30; discharged improved, 72; discharged unimproved, 25; discharged dead, 4; discharged to other care, 26; carried, 83. Disposition of other cases: prenatal—discharged to maternity care, 25; discharged to hospital, 2; discharged to other care, 2; carried, 23. Dispensary social service—discharged dispensary care, 16; carried, 0. Hospital social service—discharged home, 13; discharged dead, 1; discharged to dispensary, 1; discharged to Pavilion "F," 0; discharged lost, 3; carried under supervision 33, and in hospital, 9. Venereal—discharged cured, 0; discharged temporarily, 0; discharged to other care, 0; carried by dispensary, 47; carried under supervision, 78; carried under care at the House of Good Shepherd, 16. Tuberculosis—discharged dead, 7; discharged left town, 0; discharged not T. B., 6; carried (positive), 318; carried (supervision), 65. Industrial—discharged (social or bed cases), 0; carried, 0. Total number of cases carried over into December, 578.

5. *South End Dispensary Report.*—Number of clinics, 103; surgical, 13; medical, 8; Gynecological, 8; prenatal, 3; eye and ear, 18; venereal, 9; nerve, 4; nose and throat, 9; skin, 5; children, 8; lung, 4; children's lung (observation clinic), 4; clinics with doctor attending, 98; clinics without doctor attending, 5; number of new patients treated, 115; number of old patients treated, 558; total of number of patients, 673.

6. *Industrial Dispensary, at Huyck's Mills.*—Number of clinics held, 22; number of new cases treated, 28; number of old cases treated, 162; total number treated, 190; number of physical examinations, 17.

No industrial cases are really discharged but we do not add them on to our cases carried nor do we add on the South End Dispensary Cases as carried on our General Report. They are kept separate.

ELEANOR ARCHER,
Acting Supt.

PERSONAL.—DR. FREDERIC W. HOLCOMB (A. M. C. '16), after relief from military service has begun general practice, with particular attention to consultation in internal medicine, in Kingston, N. Y.

—DR. LESTER BETTS (A. M. C. '99) has removed from 321 State Street to 813 Union Street, Schenectady, N. Y.

In Memoriam

CHARLES T. WEBB, M. D.

DR. CHARLES T. WEBB, a graduate of the Albany Medical College of the Class of 1852, died at his home in Davenport, Ia., September 9, 1920, one of the oldest remaining graduates of the College. He was born on June 18, 1826, and was consequently ninety-four years of age. After graduating from the College he remained in Albany, and was an assistant or an associate of the late Dr. Swinburne for two years. He then migrated to Davenport, and with a partner engaged in the management of a drug store. Later he confined himself entirely to mercantile pursuits and gave little time to the practice of medicine. In 1854 he married Miss Charlotte Lansing, who survives, with one son and a daughter.

THOMAS FEATHERSTONHAUGH, M. D.

Dr. THOMAS FEATHERSTONHAUGH died at his family's homestead in Duaneburg, the 27th of October, 1920.

His memory will long be cherished by many of his medical associates and they, like a host of other friends, will feel his death a personal bereavement.

He was born at Havre, France, the 19th of April, 1848, where his grandfather was then the American Consul. He came to America with his family in 1855. His preparation for college was finished at Geneva, N. Y. He entered Union College in 1867 and received his baccalaureate degree with his class in 1871. For a time, after leaving college, he was tutor in Greek at Hobart; then he came back to Schenectady and taught in the Union Classical Institute. From 1873 to 1876, he was a tutor in his *alma mater*, giving instruction in Latin, history and mathematics. He received his M. D. degree in 1877 at the Albany Medical College, having been an assistant in the astronomical work of the Dudley Observatory a part of the time of pursuing his undergraduate medical studies. Begin-

ning as a general practitioner in Schenectady, he came to Albany after a while, and here did only eye and ear work; moving, still later he went to the metropolis, where he likewise devoted his professional attention exclusively to ophthalmology and otology. In 1886 he returned to Albany where he, for the next two years, practiced these specialities. In a competitive civil service examination in 1888, he won a place in the United States Pension Office at Washington and rose to the rank of medical referee, a position which he held until his resignation in 1920.

Anybody who had enjoyed sufficient intimacy with Dr. Featherstonhaugh to be qualified to write a memorial of his life, could not do it in a perfunctory spirit.

Humanity, in both senses, was one of his most endearing qualities, but he was human as well as humane. His practical transcendentalism was exemplary; his contempt for false pretence was inherent and constant. Toward genuine truth he was always reverent. In his life was heeded the poet's admonition:

"In all that pertains to morality's scheme
Endeavor rather to be than to seem."

Mercy far outranked burnt offerings in his esteem. He regarded conventionals according to their true value—or lack of merit, according as they were worthy or failed to be so.

Dr. Featherstonhaugh's scholarly attainments entitled him to much praise. He was elected to the Phi Beta Kappa at Hobart and taught the classics in several institutions. Applied chemistry afforded him a deal of entertainment. In knowledge of astronomy he far surpassed the average student. Even after he had lived nearly three score and ten years, he mastered modern Greek to the extent of delivering addresses in that language, before the Greek Society of Washington, and he was elected by that society to its honorary presidency.

One who inquired in Washington about Old Ossawatimie Brown or the famous Harper's Ferry Raid, was referred to Dr. Featherstonhaugh as the "chief priest" of that interest. A part of his home was ornamented by a quasi arsenal of the weapons that had been used on that memorable occasion. He traveled extensively through the country seeking information about John Brown's heroic career. He became personally acquainted with the survivors of the family of that modern Cromwell, and had much correspondence with them. Having located on the Shennandoah river, the spot where had been buried four or five of Brown's men, who had been killed in the engine house at Harper's Ferry, he went there secretly at night, dug up the grave, found a large box with their remains wrapped in blankets, boxed them up and shipped them to North Elba, where they now lie buried beside those of their leader. At the time of Dr. Featherstonhaugh's death he was engaged in writing an historical novel, having the John Brown raid as its theme.

He explored the Indian mounds in Florida and procured much pottery, beads and arrow-heads, which he presented to the Smithsonian Institution.

He had collected a great many watches of different dates and makes, showing the evolution of the watch. These, also, he presented to the Institution. He delivered, in Washington and its vicinity, many lectures on the various subjects in which he was interested.

His was a versatile mind and his heart one of sterling integrity. His culture was broad and his information varied and accurate.

A welsome poesy attends the final ebbing of his really romantic life, amid the familiar scenes of his boyhood. The very house in which he breathed his last was built by a near relative, more than a century ago, having been owned by his family ever since. The relative who built it was a Miss Duane from whom the hamlet took its name. The surroundings of the residence itself were called Featherstonhaugh Park. in the issue for May, 1906, of these ANNALS, is an idyllic description of this "last of the old family mansions located in Duanesburg—a large, imposing house with piazza seventy feet in length, supported by eight massive columns—shaded by stately trees and commanding an extended view of beautiful country."

He was withal one of the most lovable of men. Possessed of a keen sense of humor, he was a genial companion; often affecting a cynicism whose reality was abundantly disproved by his practical philanthropy, which was hearty and unceasing.

He was a model of generosity. As president of the Humane Society in Washington, he did much good, and during the latter part of his life helped many young men to get an education—in the usual sense. In a broader sense, knowing him added to the education of a multitude of his friends, whose fond memory of him is tantamount to a requiem.

C. M. CULVER.

LEMON THOMSON, M. D.

DR. LEMON THOMSON, retired physician and for many years one of the leading citizens of Glens Falls, died suddenly September 15, 1920, while sitting in a chair on the porch of his summer home at West Mountain. Ten minutes before he died Dr. Thomson was talking with a friend over the telephone. He had been in poor health for about a year and during the early winter his condition was considered serious but he had recovered sufficiently to be about. He was making plans to spend the winter in Florida with his family and on the day of his death closed a contract for the rental of a cottage in the South.

Dr. Thomson practiced medicine in Glens Falls for twenty-one years and at the end of the twenty-first year of his practice retired. During his residence in Glens Falls, which was a period of about thirty-four years, he was actively interested in real estate and at the time of his death he was President of the Lemon Thomson Realty Corporation, which owns nineteen pieces of business

property in Glens Falls. Dr. Thomson established the first hospital in Glens Falls about thirty years ago. The institution was known as the "Glens Falls Hospital" and it was first established on the site of the present Colvin building. It was later moved to Elm Street and later to the old Ashley building at the corner of Warren and Church Streets. When Dr. Thomson retired from the practice of medicine he also closed the hospital.

Dr. Thomson was born in the town of Johnsburg sixty-three years ago. He was a son of the late Edward Thomson and Maria Morehouse Thomson. He graduated from the Albany Medical College in 1882. After securing his medical education he went to Germany where he took a post-graduate course in medicine and surgery. A short time after completing his post-graduate course he went to Glens Falls where he remained.

About twenty-five years ago he served the old village of Glens Falls as health officer and under his direction a vigorous campaign was conducted in behalf of health. He is said to have given Glens Falls its first general cleaning up so far as health matters were concerned. He served as a member of the Board of Education from 1911 to 1913. He was a life member of Glens Falls Lodge 121 F. and A. M.

He is survived by his wife, a son and a daughter, G. Rugge Thomson of Montreal, and Mrs. W. Dale Borrer, of Glens Falls, and a brother, Edward Thomson. Dr. Thomson was one of a family of four children, the only one of whom is living is Edward Thomson. The other two were the late Mrs. Charles E. Bullard and Thomas Thomson.

HARRY FISKE HULL, M. D., COMMANDER, U. S. N.

COMMANDER HULL was born in Troy, N. Y., April 29, 1875, and graduated from the Albany Medical College in 1899, practiced medicine in Vermont for a short time, afterward moving to Colorado. He entered the Navy from there, as an Assistant Surgeon, April 12, 1904. His first duty was at the Newport Hospital. From there he went to the Navy Medical School at Washington, D. C., graduating with honor in 1905. He then served on the U. S. S. *Franklin* at Norfolk, Va., later performed duty at the Philadelphia and New York Naval Hospitals, Culebra, Virgin Islands, and Newport, R. I., again. He served on board the U. S. S. *Paducah*, and the U. S. S. *Panther*. In 1912 he went to Bremerton Naval Hospital as executive officer. From 1915 to 1917 he served on board the U. S. S. *South Carolina* as senior medical officer, and from 1917 to 1919 he was executive officer at the U. S. Naval Hospital at Great Lakes, Ill. In September, 1919, he went to the Naval Hospital, Ft. Lyon, Colo., at which place he died suddenly October 30, 1920, of angina pectoris. On June 1, 1899, he married Mildred Ostrander of Troy, who survives him, as do also three children, Mrs. Virgil Faires of Boulder, Colo., Richard O. and William, and one sister, Miss Ella M. Hull, of Troy.

Current Medical Literature

NEUROLOGY

Puncture of the Cisterna Magna.

AYER. *Archives of Neurology and Psychiatry*, 1920, IV, 529.

Ayer has applied to man a procedure long used as the routine method for obtaining cerebrospinal fluid in animals. The technic has been described elsewhere (*American Journal of Medical Sciences*, 1919, CLVII, 789). Ayer has made forty-three punctures on twenty patients for spinal subarachnoid block following meningitis and for serum injection in epidemic meningitis. He has also found it a valuable and safe procedure in the early diagnosis of cord compression. By a combined cistern and lumbar puncture Ayer has clearly demonstrated the subarachnoid block in cases of cord compression. The histories and findings of four verified cases of this condition are given with charts, diagrams and photographs of the fluids obtained. He concludes that cisterna puncture should be employed when it is desirable to reach the upper reservoirs of the cerebrospinal fluid system. The technic is easy to acquire. It is of value for both diagnostic and therapeutic purposes. Combined with lumbar puncture it has special value in the diagnosis of cord compression from causes other than meningitis.

HENRY VIETS.

Intracistern Injections of Salvarsanized Serum in Neuro-Syphilis.

McCUSKER. *Boston Medical and Surgical Journal*, 1920, CLXXXIII, 490

McCusker reports the use of the cistern route of Ayer in the treatment of neuro-syphilis by diarsenolized serum. He thinks that cistern puncture offers another route of application in the method of therapy in syphilis of the central nervous system. It gets the serum nearer to the seat of the disease; it is easier to accomplish than a spinal tap; it offers no more danger than rhachicentesis.

HENRY VIETS.

Lead in the Urine in Neuro-Circulatory Disturbances.

MCDONALD AND McCUSKER. *Boston Medical and Surgical Journal*, 1920, CLXXXIII, 543.

McDonald and McCusker call attention to the Chapman standard of one quarter to one half of a milligram of lead per liter of urine as sufficient to cause chronic plumbism. Twelve cases are briefly described of a neuro-circulatory nature all with lead in their urine in excess of Chapman's standard. None of these cases showed signs of lead poisoning such as the lead-line, anaemia, or stippling. It was only by making a routine urinary examination that the lead element was discovered. They think that lead should always be considered as one of the etiological factors in obscure cases presenting neurological signs and symptoms.

HENRY VIETS

INDEX TO VOLUME XLI

Acrocephaly and Scaphocephaly with Symmetrically Distributed Mal-formation of the Extremities.....	395
Action Diurétique du Riz.....	103
Albany Association of the Blind. The Blind—Their Birthright.....	269
Albany Bureau of Health. See Albany Department of Public Safety	
Albany County Medical Society. See Medical	
Albany Department of Public Safety, Vital Statistics..30, 65, 94, 135 171, 203, 236, 276, 315, 348, 385, 414	
Albany Guild for Public Health Nursing. The..34, 69, 99, 140, 176, 207 240, 280, 318, 352, 388, 418	
Albany Guild for Public Health Nursing—Superintendent's Report for the Year. By Florence R. Freeman.....	139
Albany Hospital, The.....	158, 242, 307, 371
Eighteenth Report of Pavilion F. By J. Montgomery Mosher, M. D.....	371
Reports from the Roentgen Ray Department of the. By John M. Berry, M. D.....	307, 409
The New X-Ray Laboratory at the. By John M. Berry, M. D...	158
Albany Hospital Training School for Nurses—Graduation Report, 1920, The. By Sally Johnson.....	247
The Graduation Exercises of the.....	242
(Historical sketch). By Sally Johnson.....	253
Albany Medical College.....	88, 131, 241
All-American Health Conference, An.....	355
Allied Medical Professions, The Society of.....	101
Alumni Day, 1920. (Editorial).....	131
Alumni. President Salmon's letter to the. (Albany Medical College)	132
American Field Hospital Finally Stationed, An.....	179
American Journal of Obstetrics and Gynecology. The.....	390
American Proctologic Society.....	143
(American Red Cross) A Year of Red Cross Work.....	353
Analysis of a Year's Surgical Work, 1919, of E. MacD. Stanton, M. D., F. A. C. S., and C. W. Woodall, M. D. By C. W. Woodall, M. D.....	218
Anti-Vaccinationist in Poland.....	101
Asiatic Cholera and Saline Infusion. (Editorial).....	28
Association for the Study of Internal Secretions, The.....	99
Association of Military Surgeons of the United States, The Twenty- Eighth Annual Meeting of the.....	142

Beilby, George E., M. D. Surgical Treatment of Hyperthyroidism— Relation Existing Between the Amount of Gland Removal and the Permanency of Relief.....	199
Bender Hygienic Laboratory, The.....	390
Berry, John M., M. D. Reports from the Roentgen Ray Department of the Albany Hospital.....	307, 409
The New X-Ray Laboratory at the Albany Hospital.....	158
Biggs, Herman M., M. D. Letter concerning syphilis.....	273
Bladder, A case of Primary Sarcoma of the. By Arthur H. Stein, M. D.....	19
Blind, Correspondence from the New York State Commission for the	269
Blind, The—Their Birthright. Albany Association of the Blind....	269
Bohemia, A School for Nurses in.....	178
Botulism	243
Brain Volume, The Effect of Salt Indigestion on Cerebro-Spinal Fluid Pressure and.....	395
Cancer, Metabolism in Leukemia and, During Radium Treatment. By Thomas Ordway, M. D., Jean Tait, A. B. and Arthur Knudson. Ph. D.....	1
Cerebrospinal Fluid, A Method for the Quantitative Determination of Protein in.....	397
Cerebro-Spinal Fluid Pressure and Brain Volume, The Effect of Salt Indigestion on.....	395
Cerebro-Spinal Meningitis, Notes on an Epidemic of. By Frederick W. McSorley, M. D.....	55
Certificate Awards for Graduates in Health Course.....	241
Children, French, War's Effect on.....	177
Vienna's Starving.....	391
Chivalry in Montenegro, Southern.....	101
Cholera, Asiatic, and Saline Infusion. (Editorial).....	28
Chylous Effusion in the Peritoneal and Pleural Cavities with Recovery, The Report of a Case of True. By Hermon C. Gordinier, A. M., M. D.....	328
Civil Service, United States.....	176
Cisterna Magna, Puncture of the.....	423
Clark, Joseph E., M. D. Mental Hygiene.....	145
Clinics, Diagnostic, New York.....	100
Complement Fixation in Tuberculosis.....	243
Coronary Thrombosis (Pericarditis Episternocardica). The Signifi- cance of Transient Localized Pericardial Friction in. By L. Whit- tington Gorham, M. D.....	109
Cotton Operating Gloves, Polish Surgeons Use.....	320
Country Doctor, Some Notions of a. By Luther Emerick, M. D....	323

Culver, C. M., M. D., Memorial of Thomas Featherstonhaugh, M. D.	419
Culver, C. M., M. D. "The Evil That Has Been Spoken of Physicians." Translated from the French by.....	22

DEATHS:

Deck, Dr. Otis H.....	246
Featherstonhaugh, Dr. Thomas R.....	394
Thomson, Dr. Lemon.....	394
Webb, Dr. Charles T.....	394
Diagnostic Clinics, New York.....	100
Diphtheria, Typhoid Fever and Tuberculosis, A Comparative Study of the Diagnosis of Specimens from Cases of, in Different Laboratories of New York State. By Joseph S. Lawrence, M. D. and Ellen Finley.....	209
Disease, The Management of Chronic Renal, Based upon the Newer Laboratory Diagnostic Methods. By Nelson K. Fromm, A. B., M. D.....	361
Diseases in Montenegro.....	320
Diurétique, Action, du Riz.....	103
Doctor, Some Notions of a Country. By Luther Emerick, M. D....	323
Emerick, Luther, M. D. Some Notions of a Country Doctor.....	323
Epidemic of Cerebro-Spinal Meningitis, Notes on an. By Frederick W. McSorley, M. D.....	55
Evacuation Hospital, A. E. F., Some Remarks on Work in an. By James N. Vander Veer, M. D.....	42
"Evil That Has Been Spoken of Physicians, (The)." Translated from the French by C. M. Culver, M. D.....	22
Field Hospital Finally Stationed, An American.....	170
Finley, Ellen and Joseph S. Lawrence, M. D. A Comparative Study of the Diagnosis of Specimens from Cases of Typhoid Fever, Tuberculosis and Diphtheria in Different Laboratories of New York State	209
France, Maternal Welfare Work in, to Continue.....	102
Freeman, Florence R. Superintendent's Report for the Year. (Albany Guild for Public Health Nursing).....	139
French Children, War's Effect on.....	177
Fromm, Nelson K., A. B., M. D. The Management of Chronic Renal Disease Based upon the Newer Laboratory Diagnostic Methods....	361
Frontal Lobe, Notes on War Injuries of the. By Henry Viets, M. D.	14
Gordinier, Hermon C., A. M., M. D. A Report of Two Cases of Syringomyelia	399

Gordinier, Hermon C., A. M., M. D. The Report of a Case of True Chylous Effusion in the Peritoneal and Pleural Cavities with Recovery	328
Gorham, L. Whittington, M. D. The Significance of Transient Localized Pericardial Friction in Coronary Thrombosis (Pericarditis Epistenocardica)	109
Government Needs Physicians.....	176
Haiti, Training Native Nurses for.....	390
Health, Albany Bureau of: See Albany Depart. of Public Safety	
Health Conference, An All-American.....	355
Health Course, Certificate Awards for Graduates in.....	241
Health, Indians and.....	245
Health, Public, The Post-Graduate Course in. (Editorial).....	88
Health Resort, Practical Side of Saratoga Springs as a. By Douglas C. Moriarta, Ph. G., M. D., F. A. C. S.....	334
Health Service, Public, United States.....	273
Health Work in the Schools of New York State. By William A. Howe, M. D.....	183
Hospital, Albany, The.....	158, 242, 307, 371
Eighteenth Report of Pavilion F. By J. Montgomery Mosher, M. D.....	371
Reports from the Roentgen Ray Department of the. By John M. Berry, M. D.....	307
The New X-Ray Laboratory at the. By John M. Berry, M. D..	158
Training School for Nurses—Graduation Report, 1920, The. By Sally Johnson.....	247
Training School for Nurses, The Graduation Exercises of the..	242
Training School for Nurses, The. (Historical sketch). By Sally Johnson	253
Hospital, An American Field, Finally Stationed.....	179
Hospital, Evacuation, A. E. F., Some Remarks on Work in an. By James N. Vander Veer, M. D.....	42
Hospital, Typhus Research, in Poland.....	392
Howard, William P., M. D. Fracture of the Tarsal Scaphoid with Dorsal Dislocation of the Major Fragment.....	406
Howe, William A., M. D. Health Work in the Schools of New York State	183
Hygiene, Mental, By Joseph E. Clark, M. D.....	145
Hygiene, Mental, The Place of, in Social Work.....	141
Hygiene, Social, Educating the Rural Districts in.....	179
Hyperthyroidism, Surgical Treatment of—Relation Existing Between the Amount of Gland Removed and the Permanency of Relief. By George E. Beilby, M. D.....	199
Indians and Health.....	245

IN MEMORIAM:

Beebe, Frank, M. D.....	356
Casey, Fred B., M. D.....	358
Classen, Frederic L., M. D.....	322
Cotter, John Henry, M. D.....	359
Deck, Otis H., M. D.....	246
Featherstonhaugh, Thomas, M. D. By C. M. Culver, M. D....	419
Fuller, Robert Mason, M. D.....	70
Gallup, James H., M. D.....	106
Genzmer, George Victor, M. D.....	106
Greene, Frederick Randall, M. D.....	208
Hoff, Colonel John Van Rensselaer, M. D., U. S. A.....	104
Hull, Commander Harry Fiske, M. D.....	422
Lanehart, Louis Nott, M. D.....	180
Lawler, Michael J., M. D.....	144
Lipes, Robert S., M. D.....	35
Mereness, Henry E., M. D.....	321
Scofield, Walter W., M. D.....	394
Steenberg, Byron U., M. D.....	321
Thomson, Lemon, M. D.....	421
Turner, Melvin H., M. D.	35
Van Derzee, Douw Lansing, M. D.....	359
Webb, Charles T., M. D.....	419
Internal Secretions, The Association for the Study of.....	99
Intestinal Tuberculosis. By Robert C. Paterson, M. D.....	285
Iritis, The Causes, Diagnosis and Treatment of. By John R. Shannon, M. D.....	37
Johnson, Sally. The Albany Hospital Training School for Nurses— Graduation Report, 1920.....	247
The Albany Hospital Training School for Nurses. (Historical sketch)	253
Knudson, Arthur, Ph. D., Thomas Ordway, M. D. and Jean Tait, A B. Metabolism in Leukemia and Cancer During Radium Treatment . . .	1
Laboratories of New York State, A Comparative Study of the Diag- nosis of Specimens from Cases of Typhoid Fever, Tuberculosis and Diphtheria in Different. By Joseph S. Lawrence, M. D., and Ellen Finley	209
Laboratory Diagnostic Methods, The Management of Chronic Renal Disease Based upon the Newer. By Nelson K. Fromm, A. B., M. D.....	361
Laboratory, The Bender Hygienic.....	390
Laboratory, The New X-Ray, at the Albany Hospital. By John M. Berry, M. D.....	158

Lawrence, Joseph S., M. D. and Ellen Finley. A Comparative Study of the Diagnosis of Specimens from Cases of Typhoid Fever, Tuberculosis and Diphtheria in Different Laboratories of New York State	209
Leukemia, Metabolism in, and Cancer During Radium Treatment. By Thomas Ordway, M. D., Jean Tait, A. B. and Arthur Knudson, Ph. D.....	1
Light that Delights, A. By W. H. Morse, M. D.....	312
McSorley, Frederick W., M. D. Notes on an Epidemic of Cerebro-Spinal Meningitis.....	55
Malformations of the Extremities, Acrocephaly and Scaphocephaly with Symmetrically Distributed.....	395
Maternal Welfare Work in France to Continue.....	102
Medical Library: See New York State.	
Medical Professions, The Society of Allied.....	101
Medical Review of Reviews, The.....	390
Medical Society of the County of Albany.....	98
Medical Society of the County of Rensselaer.....	100
Medical Supplies in Siberia.....	281
Meningitis, Basilar, An Early Diagnostic Sign in.....	396
Meningitis, Cerebro-Spinal, Notes on an Epidemic of. By Frederick W. McSorley, M. D.....	55
Mental Hygiene. By Joseph E. Clark, M. D.....	145
Mental Hygiene in Social Work, The Place of.....	141
Metabolism in Leukemia and Cancer During Radium Treatment. By Thomas Ordway, M. D., Jean Tait, A. B. and Arthur Knudson, Ph. D.....	1
Military Surgeons of the United States, The Twenty-Eighth Annual Meeting of the Association of.....	142
Montenegro, Diseases in.....	320
Montenegro, Southern Chivalry in.....	101
Moriarta, Douglas C., Ph. G., M. D., F. A. C. S. Practical Side of Saratoga Springs as a Health Resort.....	334
The Pros and Cons of Radium.....	73
Morris, Robert T., M. D. The Physicians' Home.....	271
Morse, W. H., M. D. A Light that Delights.....	312
My First Case: A "Psychological Study.".....	168
"Taenia Solium.".....	382
Mosher J. Montgomery, M. D. Albany Hospital. Eighteenth Report of Pavilion F.....	371
My First Case: A "Psychological Study." By W. H. Morse, M. D..	168
Neuralgia, Trigeminal, Syphilis as an Etiological Factor in. By Henry Viets, M. D.....	345
Neuro-Syphilis, Intracistern Injections of, Salvarsanized Serum in..	423
New York Diagnostic Clinics.....	100

Neuro-Circulatory Disturbances, Lead in the Urine in.....	423
New York State Commission for the Blind, The, Correspondence from	269
New York State, Different Laboratories of, A Comparative Study of the Diagnosis of Specimens from Cases of Typhoid Fever, Tuberculosis and Diphtheria in. By Joseph S. Lawrence, M. D., and Ellen Finley.....	209
New York State, Health Work in the Schools of. By William A. Howe, M. D.....	183
New York State Medical Library:	
new current periodicals.....	108
new journal.....	398
new journals.....	284
new periodicals.....	182
recent accessions.....	35, 72, 107, 144, 181, 284, 360, 397
Nurses, A School for, in Bohemia.....	178
Nurses for Haiti, Training Native.....	390
Nurses. The Albany Hospital Training School for—Graduation Report, 1920. By Sally Johnson.....	247
Nurses. The Albany Hospital Training School for. (Historical sketch). By Sally Johnson.....	253
Nurses, The Graduation Exercises of the Albany Hospital Training School for.....	242
Nursing Profession in Poland, Development of a.....	177
Occult Tuberculosis.....	242
Ordway, Thomas, M. D., Jean Tait, A. B. and Arthur Knudson, Ph. D. Metabolism in Leukemia and Cancer During Radium Treatment	1
Osler, Sir William. (Editorial).....	57
Biography of.....	180
Paterson, Robert C., M. D. Intestinal Tuberculosis.....	285
Pericardial Friction, The Significance of Transient Localized, in Coronary Thrombosis (Pericarditis Epistenocardica). By L. Whittington Gorham, M. D.....	109
(Pericarditis Epistenocardica). The Significance of Transient Local- ized Pericardial Friction in Coronary Thrombosis. By L. Whit- tington Gorham, M. D.....	109
Peritoneal and Pleural Cavities, The Report of a Case of True Chylous Effusion in the, with Recovery. By Hermon C. Gordinier, A. M., M. D.....	328
PERSONALS:	
Arundel, Dr. Thomas.....	246
Battin, Dr. John A.....	103
Betts, Dr. Lester.....	419
Cote, Dr. Leon C.....	283
Cox, Dr. Joseph A.....	283

PERSONALS—Continued

Curry, Dr. Marcus A.....	283, 393
Gray, Dr. Richard B.....	180
Griffin, Dr. John M.....	393
Hambrook, Dr. Augustus J.....	283
Holcomb, Dr. Frederic W.	419
Hance, Dr. Samuel S.....	393
Hirst, Dr. Peter J.....	393
Lang, Dr. Arvilla.....	283
McElwain, Dr. John A.....	356
Post, Dr. Ralph B.....	208
Prest, Dr. Charles S.....	70
Rabiner, Dr. A. M.....	208
Russell, Dr. Charles L.....	246
Tebbutt, Dr. Harry K., Jr.	
Weinberg, Dr. Aaron.....	246
Wilson, Dr. Fred D.....	356
Physicians, Government Needs.....	176
Physicians' Home, The. By Robert T. Morris, M. D.....	271
"Physicians, The Evil That Has Been Spoken of." Translated from the French by C. M. Culver, M. D.....	22
Pleural Cavities, The Report of a Case of True Chylous Effusion in the Peritoneal and, with Recovery. By Hermon C. Gordinier, A. M., M. D.....	328
Poland, Anti-Vaccinationist in.....	101
Poland, Development of a Nursing Profession in.....	177
Poland, Red Cross Work in.....	393
Poland, Typhus Research Hospital in.....	392
Polish Surgeons Use Cotton Operating Gloves.....	320
Primary Sarcoma of the Bladder, A Case of. By Arthur H. Stein M. D.....	19
Proctologic Society, American.....	143
Pros and Cons of Radium, The. By Douglas C. Moriarta, Ph. G., M. D., F. A. C. S.....	73
Protein in Cerebrospinal Fluid, A Method for the Quantitative Determination of.....	397
"Psychological Study." A. My First Case: By W. H. Morse, M. D	168
Public Health, The Post-Graduate Course in. (Editorial).....	88
Quantitative Determination of Protein in Cerebrospinal Fluid, A Method for the.....	397
Radium Element for Therapeutic Purposes.....	180
Radium, The Pros and Cons of. By Douglas C. Moriarta, Ph. G., M. D., F. A. C. S.....	73

Radium Treatment, Metabolism in Leukemia and Cancer During. By Thomas Ordway, M. D., Jean Tait, A. B. and Arthur Knudson, Ph. D.....	1
Red Cross Work, A Year of. (American Red Cross).....	353
Red Cross Work in Poland.....	393
Regional Conference (health) in Washington in December, First...	319
Renal Disease, The Management of Chronic, Based upon the Newer Laboratory Diagnostic Methods. By Nelson K. Fromm, A. B., M. D.....	361
Rensselaer County Medical Society: See Medical	
Roentgen Ray Department of the Albany Hospital, Reports from the. By John M. Berry, M. D.....	307
Rural Districts, Educating the, in Social Hygiene.....	179
Saline Infusion, Asiatic Cholera and. (Editorial).....	28
Salmon's letter to the alumni, President. (Albany Medical College)	132
Salt Ingestion, The Effect of, on Cerebro-Spinal Fluid Pressure and Brain Volume.....	395
Saratoga Springs as a Health Resort, Practical Side of. By Douglas C. Moriarta, Ph. G., M. D., F. A. C. S.....	334
Scaphocephaly. Acrocephaly and, with Symmetrically Distributed Mal- formations of the Extremities	395
Scaphoid. Fracture of the Tarsal, with Dorsal Dislocation of the Major Fragment. By William P. Howard, M. D.....	406
School for Nurses in Bohemia, A.....	178
Schools, Health Work in the, of New York State. By William A. Howe, M. D.....	183
Secretions, Internal, The Association for the Study of.....	99
Shannon, John R., M. D. The Causes, Diagnosis and Treatment of Iritis	37
Siberia, Medical Supplies in.....	281
Siberia, Typhus Exterminated in.....	282
Sir William Osler. (Editorial).....	57
Biography of.....	180
Social Hygiene, Educating the Rural Districts in.....	179
Social Work, The Place of Mental Hygiene in.....	141
Society of Allied Medical Professions, The.....	101
Southern Chivalry in Montenegro.....	101
Stanton, E. MacD., M. D., F. A. C. S., and C. W. Woodall, M. D., Analysis of a Year's Surgical Work, 1919, of. By C. W. Woodall, M. D.....	218
Stein, Arthur H., M. D. A Case of Primary Sarcoma of the Bladder	19
Sugar. By Frank Van Der Bogert, M. D.....	192
Surgeons, Military, of the United States, The Twenty-Eighth Annual Meeting of the Association of.....	142

Surgeons, Polish, Use Cotton Operating Gloves.....	320
Surgical Treatment of Hyperthyroidism—Relation Existing Between the amount of Gland Removed and the Permanency of Relief. By George E. Beilby, M. D.....	199
Surgical Work, Analysis of a Year's, 1919, of E. MacD. Stanton, M. D., F. A. C. S., and C. W. Woodall, M. D. By C. W. Woodall, M. D.....	218
Syphilis as an Etiological Factor in Trigeminal Neuralgia. By Henry Viets, M. D.....	345
Syphilis, Letter concerning. By Herman M. Biggs, M. D.....	273
Syngomyelia. A Report of Two Cases of. By Hermon C. Gordi- nier, A. M., M. D.	399
"Taenia Solium." By W. H. Morse, M. D.....	382
Tait, Jean, A. B., Arthur Knudson, Ph. D. and Thomas Ordway, M. D. Metabolism in Leukemia and Cancer During Radium Treatment	1
"The Evil That Has Been Spoken of Physicians." Translated from the French by C. M. Culver, M. D.....	22
Training School for Nurses, The Albany Hospital—Graduation Report, 1920. By Sally Johnson.....	247
Training School for Nurses, The Albany Hospital. (Historical sketch) By Sally Johnson.....	253
Training School for Nurses, The Graduation Exercises of the Albany Hospital	242
Trigeminal Neuralgia, Syphilis as an Etiological Factor in. By Henry Viets, M. D.....	345
Tuberculosis, Complement Fixation in.....	243
Tuberculosis, Diphtheria and Typhoid Fever, A Comparative Study of the Diagnosis of Specimens from Cases of, in Different Labora- tories in New York State. By Joseph S. Lawrence, M. D. and Ellen Finley.....	209
Tuberculosis, Intestinal. By Robert C. Paterson, M. D.....	285
Tuberculosis, Occult.....	242
Tuberculous Colitis, X-Ray Diagnosis of Early.....	243
Typhoid Fever, Tuberculosis and Diphtheria, A Comparative Study of the Diagnosis of Specimens from Cases of, in Different Labora- tories of New York State By Joseph S. Lawrence, M. D. and Ellen Finley.....	209
Typhus Exterminated in Siberia.....	282
Typhus Research Hospital in Poland.....	392
United States Civil Service.....	176
United States Public Health Service.....	273
United States, The Twenty-Eighth Annual Meeting of the Associa- tion of Military Surgeons of the.....	142

Vaccinationist, Anti-, in Poland.....	101
Van Der Bogert, Frank, M. D. Sugar.....	192
Vander Veer, James N., M. D. Some Remarks on Work in an Evaluation Hospital, A. E. F.....	42
Vienna's Starving Children.....	391
Vienna's Vital Statistics.....	390
Viets, Henry, M. D. Notes on War Injuries of the Frontal Lobe..	14
Syphilis as an Etiological Factor in Trigeminal Neuralgia....	345
Vital Statistics. See also Albany Department of Public Safety	
Vital Statistics, Vienna's.....	390
War Injuries of the Frontal Lobe. Notes on. By Henry Viets, M. D.	14
War's Effect on French Children.....	177
Washington, First Regional Conference (health) in, in December...	319
Welfare Work, Maternal in France to Continue.....	102
Woodall C. W., M. D. Analysis of a Year's Surgical Work, 1919, of E. MacD. Stanton, M. D., F. A. C. S. and C. W. Woodall, M. D.	218
X-Ray Diagnosis of Early Tuberculous Colitis.....	243
X-Ray Laboratory at the Albany Hospital, The New. By John M. Berry, M. D.....	158

ILLUSTRATIONS

A Corner of the Practical Nursing Class Room, Albany Hospital....	260
Approach to Albany Hospital.....	257
Lateral X-Ray showing extensive bone loss and numerous radiating fractures. Plate by Dr. W. P. Howard, Roentgenologist, U. S. Army Base Hospital No. 33.....	15
New Building for Nurses, Albany Hospital.....	258
Plate from the Roentgen Ray Department, Albany Hospital. Case of Osteomyelitis, with Cyst.....	311
Private Dressing Rooms and Corridor, X-Ray Laboratory, Albany Hospital	161
Private X-Ray Operating Room, Albany Hospital.....	165
Sir. William Osler and Officers of Albany Hospital-Medical College Base Hospital Unit No. 33, U. S. A., at Portsmouth, Eng.....	61
The Tuberculosis Sanatorium, Albany Hospital.....	259
Fracture of the Tarsal Scaphoid.....	407, 408

400396

Biological
x Medical
Serials

P Albany Medical Annals.

Med v.41, 1920.

A

NAME OF BORROWER.

DATE.

University of Toronto Library

Biological
& Medical
Serials

DO NOT
REMOVE
THE
CARD
FROM
THIS
POCKET

Acme Library Card Pocket
LOWE-MARTIN CO. LIMITED

